Draft Resource Management Plan
for
Del Dios Highlands Preserve
San Diego County

May 2009

PARKS AND RECREATION
COUNTY OF SAN DIEGO
Where having fun is natural.

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1.0 INTRODUCTION

Del Dios Preserve (Preserve) consists of approximately 468.8 acres located southwest of Escondido in western San Diego County, California. The County acquired the Preserve in 2002 for inclusion in the South County Multiple Species Conservation Program (MSCP) preserve system. The Preserve consists of medium quality native habitats, as well as areas that have been marginally impacted by human activities including a staging area and trail system.

1.1. Purpose of Management Plan

This Resource Management Plan (RMP) has been prepared as a guidance document to manage and preserve the biological and cultural resources within the Preserve, and to provide Area-Specific Management Directives (ASMDs) pursuant to the requirements of the County's Multiple Species Conservation Program (MSCP) Subarea Plan (County, 1997) and Sections 10.9A and 10.9B of the Framework Management Plan (County 2001). These sections specify that the County will be responsible for managing lands which it owns or acquires within the MSCP preserve system.

This RMP will:

a) guide the management of vegetation communities/habitats, plant and animal species, cultural resources, and programs described herein to protect and, where appropriate, enhance biological and cultural values;
b) serve as a guide for appropriate public uses of the property;
c) provide a descriptive inventory of the vegetation communities/habitats, plant and animal species, and the archaeological and/or historical resources that occur on this property;
d) establish the baseline conditions from which adaptive management will be determined and success will be measured; and provide an overview of the operation and maintenance requirements to implement management goals.

Chapter 5 of this RMP includes ASMD's for Del Dios Highlands Preserve.

It is recognized that the County owned land is only a small portion of the MSCP preserve system. The County does ensure management of other lands that are dedicated as a conservation easement for discretionary project mitigation, through requiring land developers to prepare Resource Management Plans. The County will spearhead a larger coordinated effort to ensure that other conserved lands in the area that make up the MSCP Preserve are also being monitored and managed consistent with this RMP and the overall goals of the MSCP Plan and County's MSCP Subarea Plan when a regional funding source is identified pursuant to Section 10.9C of the Framework Management Plan.

1.1.1 MSCP Background

The MSCP is a cooperative habitat program that encompasses 582,000 acres and establishes a 172,000-acre preserve system in southwestern San Diego County. The MSCP covers 85 plant and animal species and 23 vegetation communities. Agencies participating in the MSCP include the County, other local jurisdictions, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). Local jurisdictions and special districts implement their respective portions of the MSCP Plan (City of San Diego 1998) through Subarea plans, which describe specific implementing mechanisms for the MSCP. The combination of the subregional MSCP Plan and Subarea plans serve as a Multiple Species Habitat Conservation Plan (HCP) pursuant to Section 10(a)(1)(B) of the Federal Endangered Species Act (FESA), the Natural Community Conservation Planning (NCCP) Program pursuant to the California NCCP Act of 1991 and the California Endangered Species Act (CESA). Del Dios Highlands Preserve is owned and operated by the County and is included under both the County of San Diego South County MSCP Subarea Plan (County of San Diego 1997) and the Draft North County MSCP Subarea Plan. The southern portion of the Preserve, approximately 120 acres, is located in the South County MSCP Subarea Plan, and the northern area, approximately 348 acres, of the Preserve is located in the North County MSCP Subarea Plan. Monitoring for the Preserve will follow the protocols of the South County MSCP Subarea Plan.

1.1.2 County Subarea Plan

The South County MSCP Subarea Plan (MSCP Subarea Plan) was adopted in October 1997. The MSCP Subarea Plan is subdivided into three segments: Lake Hodges, South County, and Metro-Lakeside-Jamul, with Del Dios Highlands Preserve located in the Lake Hodges segment. In this segment, preserve boundaries were not designated; rather, pre-approved mitigation areas consisting of high-value habitats were identified and a set of preserve design goals and criteria for cores and linkages were established for consideration during project review. The North County MSCP Subarea Plan is currently in draft form.

1.1.3 Framework Management Plan and Area-Specific Management Directives

According to Section 6.3.1 of the MSCP Plan and as a condition of the Implementing Agreement with the Wildlife Agencies (Section 10.10), the County was required to prepare a Framework Management Plan for the portion of the MSCP Preserve within the MSCP Subarea Plan's boundaries. The document was submitted to the Wildlife Agencies on August 31, 2001. The Framework Management Plan sets forth management goals and objectives, along with general management directives that apply to all areas of the MSCP Subarea Plan.

The Framework Management Plan also incorporates a requirement for the subsequent preparation and implementation of ASMDs. These directives are required to be developed following baseline surveys using generally accepted

practices and procedures for management of biological preserves, and in compliance with the criteria established by the Framework Management Plan. They are intended to be specific management actions that are appropriate for the habitats and species found in a local area and take into account the particular circumstances of the given area. In addition to addressing the general directives of the Framework Management Plan and species-specific management requirements of MSCP Table 3-5, ASMDs are required to address fuel management activities.

1.2. Implementation

1.2.1 Management Approach

A key concept of the MSCP is the use of "Adaptive Management Techniques" directed at the conservation and recovery of individual species. This term refers to modifying management actions when monitoring of the resources indicates that changes are needed. It is particularly useful where there is uncertainty regarding the efficacy of certain management measures and/or the needs of target species. Adaptive management and an associated monitoring program are designed to inform land managers of the status and trends of covered species, natural communities, and landscapes in a manner that provides data to allow informed management actions and decisions.

It is anticipated that the recommended management actions provided in this RMP will be dynamic in nature. Applying adaptive management, the effectiveness and appropriateness of recommended management actions would be determined through review of management goal and objective achievement so that changes can be made to management directives and implementation measures as needed. Adaptive management techniques depend upon the specific issues impacting the resources. Therefore, the techniques herein may be subject to change or revisions when applied. Additionally, the monitoring protocols/requirements for MSCP covered species and habitats will be revisited periodically by participants of the MSCP and are subject to change based on adoption of updated protocols. It is anticipated that this RMP will be revised once every five years, as needed. The RMP may be revised on a shorter time scale if there is a change in circumstance, for example, acquisition of additional Preserve land.

1.2.2 Responsible Parties/Designation of Land Manager

The County is responsible for management, biological monitoring, and meeting the conditions of MSCP coverage on County-owned lands conserved as part of the MSCP Preserve system. The Preserve is fully owned and operated by the County Department of Parks and Recreation (DPR) and the DPR District Park Manager assigned to the Preserve is the land manager. DPR (District Park Manager and staff of Resource Management Division) will be responsible for the implementation and enforcement of the RMP.

The Preserve is located in the management district of one supervising park ranger, two park rangers, and three seasonal park rangers. The Preserve is patrolled two to three times per week. It is expected that many of the implementation measures, especially the maintenance tasks, will be carried out by the rangers who are most familiar with the site and currently patrol the Preserve.

1.2.3 Regulatory Context

The County's park rangers manage County parks/preserves and enforce park/preserve rules and regulations pursuant to San Diego County Code of Regulatory Ordinances Title 4, Division 1, Chapter 1 County Parks and Recreation. In addition, per County Code of Regulatory Ordinance Sec 41.111, 41.112, 41.113, all wildlife, plant, historical artifacts, and geologic features are protected and are not to be damaged or removed. Any person who violates any provision of Sections 41.111, 41.112, 41.113 is guilty of a misdemeanor as provided in Sections 11.116, 11.117, and 11.118 of this Code, punishable by fines up to $2,500 a day for each day the person violates these sections. The park rangers will contact law enforcement who will cite the offending individual. In addition, if an individual does not comply with signs within a facility and ignores park ranger instructions, the individual could potentially be charged with a misdemeanor by law enforcement.

1.2.4 Limitations and Constraints

Implementation and the timing of many of the management directives will be based on funding in any fiscal year and will be determined through the DPR Operations Division who will prioritize preserve needs in their work plan for the fiscal year based on the priority of the directives in the RMP for each preserve.

2.0 PROPERTY DESCRIPTION

2.1 Legal Description

The Preserve property is located southwest of Escondido, west of Del Dios Highway, and northwest of Lake Hodges, in western San Diego County, California (Figure 1). The Preserve is within the USGS 7.5' Rancho Santa Fe/Escondido Quadrangle, Township 12 South, Range 2 West, Sections 6 and 31 (Figure 2). The Assessor's Parcel Numbers for the Preserve are 238-020-36, 238-020-34, 238-020-37, 270-010-03, 270-010-04, 270-010-05, 270-010-02, 270-030-15, and 270-030-07.

2.2 Geographical Setting

The Preserve is located in the coastal foothills of northern San Diego County in the Peninsular Geomorphic Range. The site comprises moderately to steeply sloping terrain with a total elevation change of nearly 700 feet (from approximately 600 to 1,300 feet, or 180 to 400 meters) above mean sea level (msl).

Del Dios Highlands Preserve Baseline Surveys

PARKS AND RECREATION
COUNTY OF SAN DIEGO

Basemap Legend

- Freeway
- River
- Lake/Reservoir/Lagoon

N

Miles

0 11

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Regional Location Map

Figure 1

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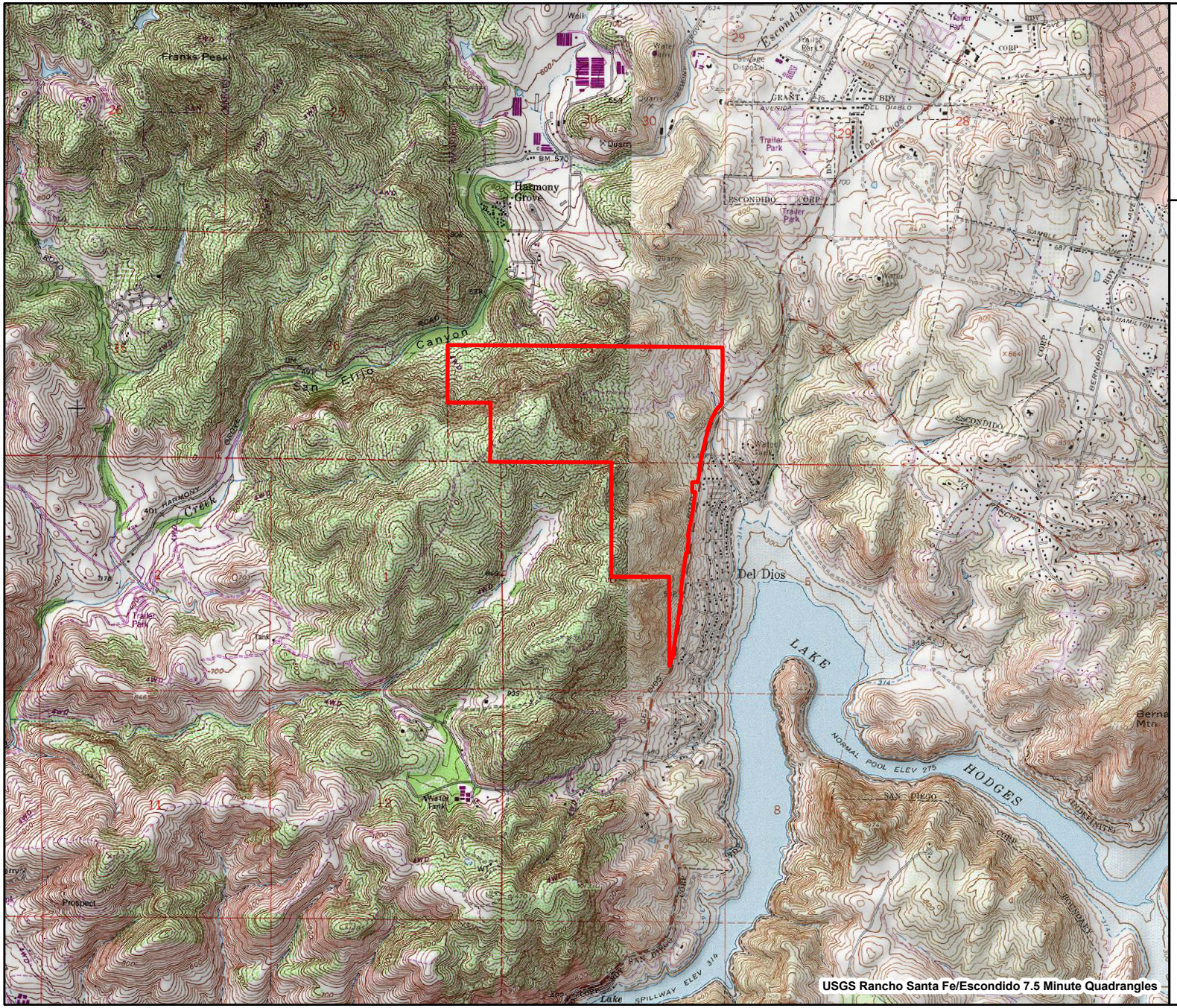

Del Dios Highlands Preserve Baseline Surveys

PARKS AND RECREATION
COUNTY OF SAN DIEGO

Legend

Del Dios Highlands Preserve Boundary

N

Feet

0 3,300

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USGS Togographic Quadrangle Map

Figure 2

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2.2.1 Site Access

The northeastern area of the Preserve can be accessed via a staging area located adjacent to Del Dios Highway. One graded dirt road/trail traverses the Preserve providing a non-motorized connection between the eastern and western preserve boundaries and ultimately to the Elfin Forest Recreational Reserve that is contiguous to the western Preserve boundary. A gate is located on the western boundary of the Preserve preventing vehicle access from Elfin Forest Recreational Reserve to the dirt road/trail on the Preserve (see Figure 6). In addition, a gate is located on the eastern boundary of the Preserve at Del Dios Highway and a second gate 250 feet northwest of the first gate.

2.2.2 MSCP Context

The southern portion of the Preserve is included within the Lake Hodges segment of the MSCP Subarea Plan and is designated as Pre-Approved Mitigation Area (PAMA). The northern portion of the preserve is included in the Draft North County MSCP Subarea Plan and is designated as PAMA. To the north and west of the northern portion of the Preserve are lands also designated as Draft North County MSCP Subarea Plan PAMA. There are developed urban areas to the east and south of the Preserve (Figure 3).

2.3 Physical and Climatic Conditions

2.3.1 Geology and Soils

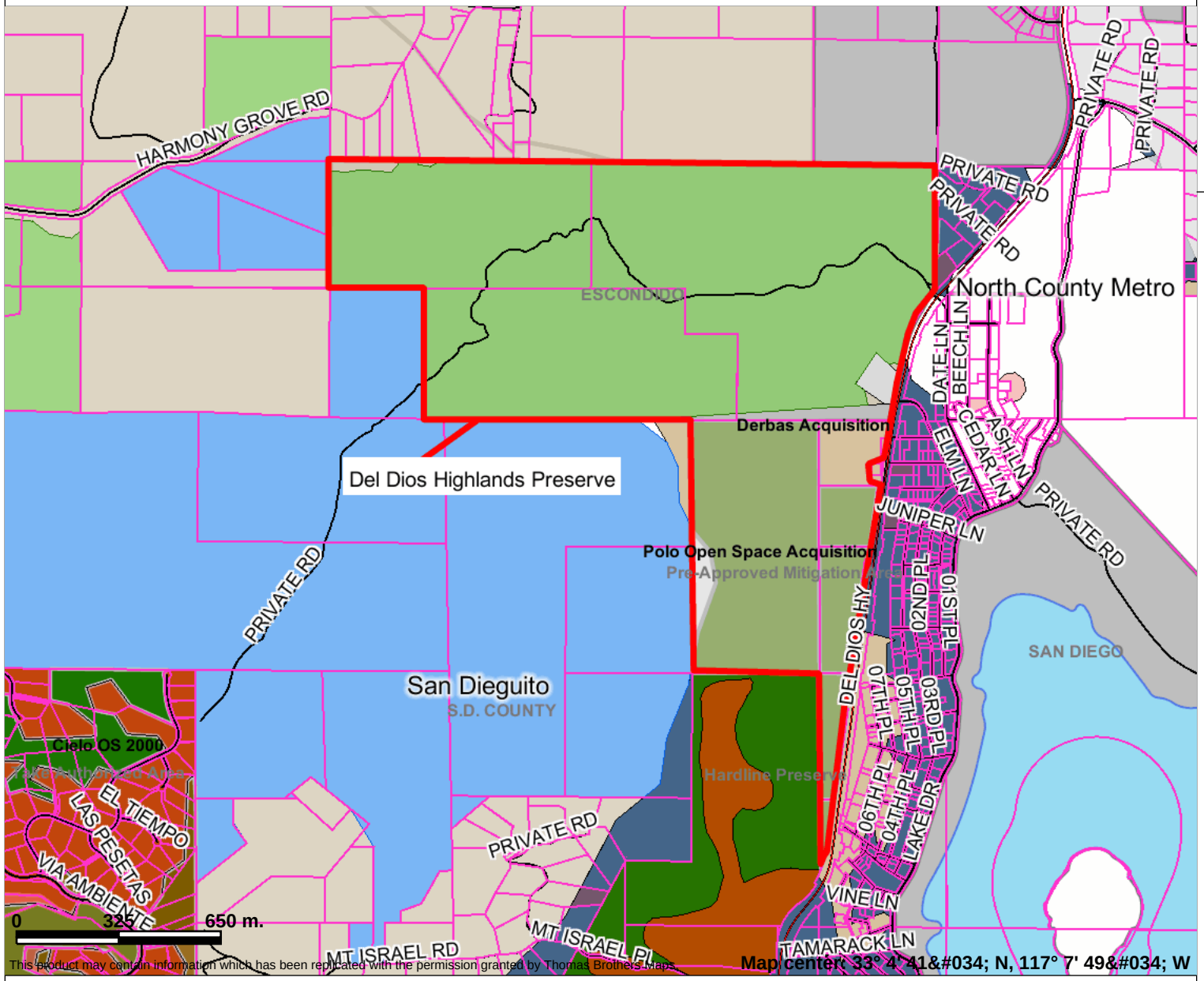
According to the Natural Resource Conservation Service's (NRCS) Web Soil Survey (WSS), eight different soil types are present throughout the Preserve. The WSS provides soil data and information produced by the National Cooperative Soil Survey and provides access to the largest natural resource information system in the world.

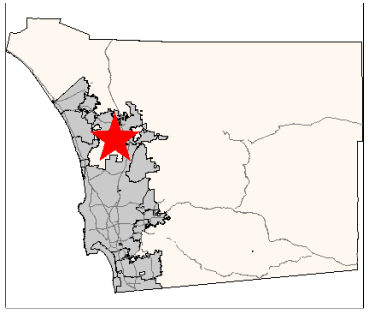
Several general soil associations are represented within the Preserve and include: the Cieneba series, Fallbrook, Las Posas, Placentia, Steep Gullied Land, and Vista (Figure 4). Each of these soils and soil series is described in detail below.

Cieneba Very Rocky Coarse Sandy Loam 30-75 percent slopes (CmrG)

This soil type is similar in origin, texture, and permeability, to Cieneba Coarse Sandy Loam 15-30 percent slopes. Cieneba Very Rocky Coarse Sandy Loam 30-75 percent slopes are excessively drained, very shallow to shallow, coarse sandy loams formed from material weathered in place from granitic rock. This soil type occurs on steep to very steep terrain. Fertility is low. Runoff is rapid to very rapid, and the erosion hazard is high to very high. This soil type has poor overall productivity and supports wildlife habitat, recreation, and range. Within

Figure 3. MSCP Designations and Adjacent Conserved Lands





Legend

- Parcels with out labels
- Highways
- Freeways
- Streets

Water Bodies

- Water Bodies

Habitrak 2005 Data

- Habitrak Gain
- Habitrak Loss
- Biological Open Space Easements

Public Version: DRAFT MSCP Designations - North

- Preserve Areas
- Pre-Approved Mitigation Area (PAMA)
- Open Space Easement outside PAMA
- Pre-negotiated (Hardlined) Take Authorized Areas
- Outside Pre-Approved Mitigation Area (PAMA)
- Tribal Lands
- US Forest Service
- Special Districts

MSCP_Designations - South

- Hardline Preserve
- Pre-Approved Mitigation Area (PAMA)
- Major Amendment Area
- Minor Amendment Area
- Minor Amendment Area Subject to Special Considerations
- Conserved Subject to Agreement with Wildlife Agencies
- Santa Fe Valley Open Space II

N

Scale: 1:18,994

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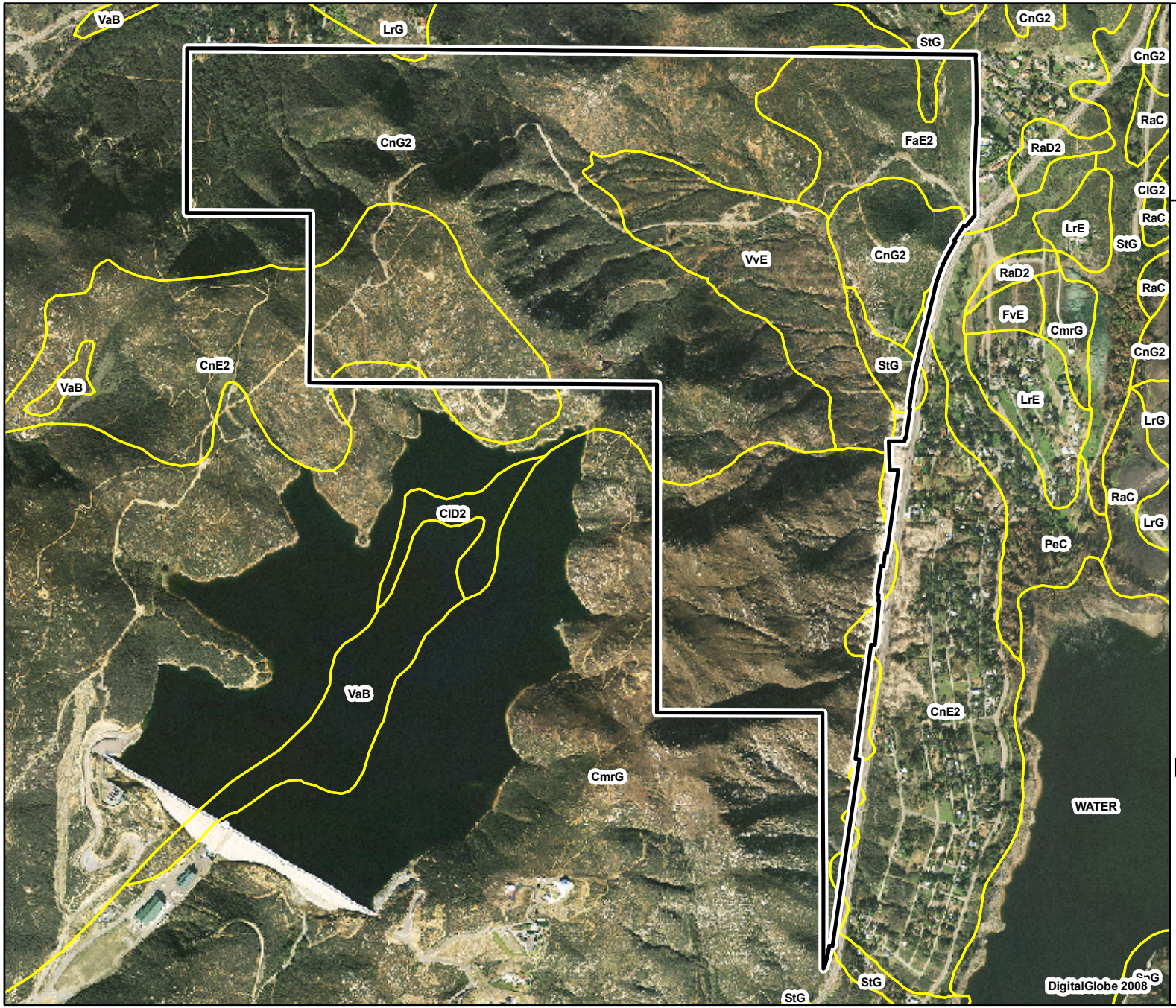
the Preserve this soil type supports southern mixed chaparral and disturbed habitat.

Cieneba – Fallbrook Rocky Sandy Loam 30-65 percent slopes, eroded (CnG2)

This complex is similar in origin, texture, runoff/drainage, permeability, and erosion hazard to Cieneba – Fallbrook Rocky Sandy Loam 9 to 30 percent slopes, eroded described below. This complex is a mixture of two discrete soil mapping types containing approximately 55 percent Cieneba Course Sandy Loam and 40 percent Fallbrook Sandy Loam with 10 percent rock outcrops and 10 percent large boulders. The Cieneba course sandy loam component of this complex is low in fertility, excessively drained, and moderately to rapidly permeable. Fallbrook Sandy Loam is medium in fertility, well drained, and slowly to moderately permeable. For both constituent soils included in this complex runoff is rapid to very rapid and the erosion hazard is high to very high. Sheet and gully erosion are classified as moderate. Within the Preserve this soil type supports seven vegetation communities: (1) disturbed coastal sage scrub, (2) eucalyptus woodland, (3) southern coast live oak riparian forest, (4) southern mixed chaparral, (5) southern willow scrub, (6) disturbed habitat, and (7) developed/urbanized land. This soil type also supports sensitive plant species Palmer's sagewort, wart-stemmed ceanothus, summer holly, and Robinson's pepper-grass.

Cieneba – Fallbrook Rocky Sandy Loam 9 to 30 percent slopes, eroded (CnE2)

This complex is a mixture of two discrete soil mapping types containing approximately 55 percent Cieneba Course Sandy Loam and 40 percent Fallbrook Sandy Loam with 5 percent rock outcrops. This complex occurs in uplands between 200 and 3,000 feet (60-900 m) above mean sea level. This complex displays the geophysical characteristics of both of is constituent sources. The Cieneba course sandy loam component of this complex is excessively drained, permeability is moderately rapid, and the fertility is low. The Fallbrook sandy loam component is well drained, permeability is moderately slow, and fertility is medium. The runoff for both soils is medium to rapid and the erosion hazard is moderate to high with sheet erosion and gully erosion classified as moderate. Four vegetation types occur within this soil type on the Preserve, including: (1) eucalyptus woodlands, (2) southern mixed chaparral, (3) disturbed habitat, and (4) developed/urbanized land. This soil type also supports sensitive plant species Brewer's calandrinia.



Del Dios Highlands Preserve Baseline Surveys

PARKS AND RECREATION
COUNTY OF SAN DIEGO

Legend

Code	Soil Type
CID2	Cieneba coarse sandy loam, 5 to 15 percent eroded
ClG2	Cieneba coarse sandy loam, 30 to 65 percent eroded
CmrG	Cieneba very rocky coarse sandy loam, 30 to percent slopes
CnE2	Cieneba-Fallbrook rocky sandy loam,9 to 30 slope,eroded
CnG2	Cieneba-Fallbrook rocky sandy loams, 30 to slopes, eroded
FaE2	Fallbrook sandy loam, 15 to 30 percent slope
FvE	Fallbrook-Vista sandy loams, 15 to 30 percen
LrE	Las Posas stony fine sandy loam, 9 to 15 per slopes
LrG	Las Posas stony fine sandy loam, 30 to 65 pe slopes
PeC	Placentia sandy loam, 2 to 9 percent slopes
RaC	Ramona sandy loam, 5 to 9 percent slopes
RaD2	Ramona sandy loam, 9 to 15 percent slopes,
SnG	San Miguel-Exchequer rocky silt loams, 9 to percent slopes
StG	Steep gullied land
VaB	Visalia sandy loam, 2 to 5 percent slopes
VvE	Vista rocky coarse sandy loam, 15 to 30 perc slopes
WATER	WATER

Basemap Legend

Del Dios Highlands Preserve Boundary

N

Feet

0 1,150

Technology Associates International Corporation

Soils

Figure 4

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Fallbrook Sandy Loam, 15 to 30 percent slopes, eroded (FaE2)

Fallbrook Sandy Loam, 15 to 30 percent slopes (eroded) is well drained, moderately deep to deep sandy loam formed in material weathered in place from grandiorite. This soil type occurs on moderately steep terrain over rock. This soil type is similar in origin, texture, and permeability to Fallbrook Sandy Loam, 5 to 9 percent slopes. Runoff is medium to rapid and the erosion hazard is moderate to high. In other features this soil type is similar to Fallbrook Sandy Loam, 5 to 9 percent slopes. Like other soils of the Fallbrook series, this soil type can support range. On the Preserve, this soil type supports six vegetation communities: (1) coastal sage scrub, (2) disturbed coastal sage scrub, (3) southern mixed chaparral, (4) southern willow scrub, (5) disturbed habitat, and (6) developed/urbanized land.

Las Posas stony fine sandy loam, 30 to 65 percent slopes (LrG)

Las Posas stony fine sandy loam, 30 to 65 percent slopes is a well drained, moderately deep, stony, fine sandy loam with a clay subsoil. It occurs on steep to very steep terrain in uplands. Fertility is medium. Permeability is moderately slow in the subsoil. Water holding ca pacity is 4 to 6 inches. Runoff is rapid to very rapid and erosion hazard is high to very high. This soil type supports grazing and wildlife habitat. Within the Preserve, this soils type supports southern mixed chaparral and developed/urbanized land.

Placentia sandy loam, 2 to 9 percent slopes (PeC)

Placentia sandy loam, 2 to 9 percent slopes, is a gently sloping to moderately sloping soil found on alluvial fans and alluvial plains. Fertility is low to medium. The available water holding capacity is 3 to 4 inches; some moisture is slowly available from the sandy clay subsoil. Permeability is very slow in the subsoil. Runoff is slow to medium, and the erosion hazard is slight to moderate. The rooting depth is 9 to 19 inches, and roots are restricted by the sandy clay subsoil. This soil type is suitable for grazing and cultivation of some crop plants, including tomatoes. Within the Preserve, southern mixed chaparral and disturbed habitat occur in conjunction with this soil type.

Steep Gullied Land (StG)

Steep Gullied Land consists of strongly sloping to steep lands that are actively eroding into old alluvium or decomposed rock. It occurs as large individual gullies or networks of multiple connected gullies where vegetative cover is sparse or has been depleted by grazing or wildfire. Vegetation mostly consists of a sparse cover of shrubs, annual grasses, and forbs. Runoff is very rapid and the erosion hazard is very high. This soil type supports five vegetation types on the Preserve, including: (1) eucalyptus woodland, (2) southern mixed chaparral, (3) southern willow scrub, (4) disturbed habitat, and (5) developed/urbanized land.

Vista Rocky Course Sandy Loam, 15 to 30 Percent Slopes (VvE)

Vista Rocky Course Sandy Loam, 15 to 30 Percent Slopes is a well-drained, moderately deep to deep course sandy loam derived from granodiorite or quartz diorite which occurs on moderately steep terrain. About ten percent of the ground surface within the soil type is covered by rock outcrops and another ten percent with large boulders. Runoff is medium to rapid and erosion hazard is moderate to high. In other features, this soil type is similar to Vista Course Sandy Loam 9-15 percent slopes. This soil type can support range. In the Preserve this soil type supports four vegetation communities: (1) eucalyptus woodland, (2) southern mixed chaparral, (3) southern willow scrub, and (4) disturbed habitat.

2.3.2 Climate

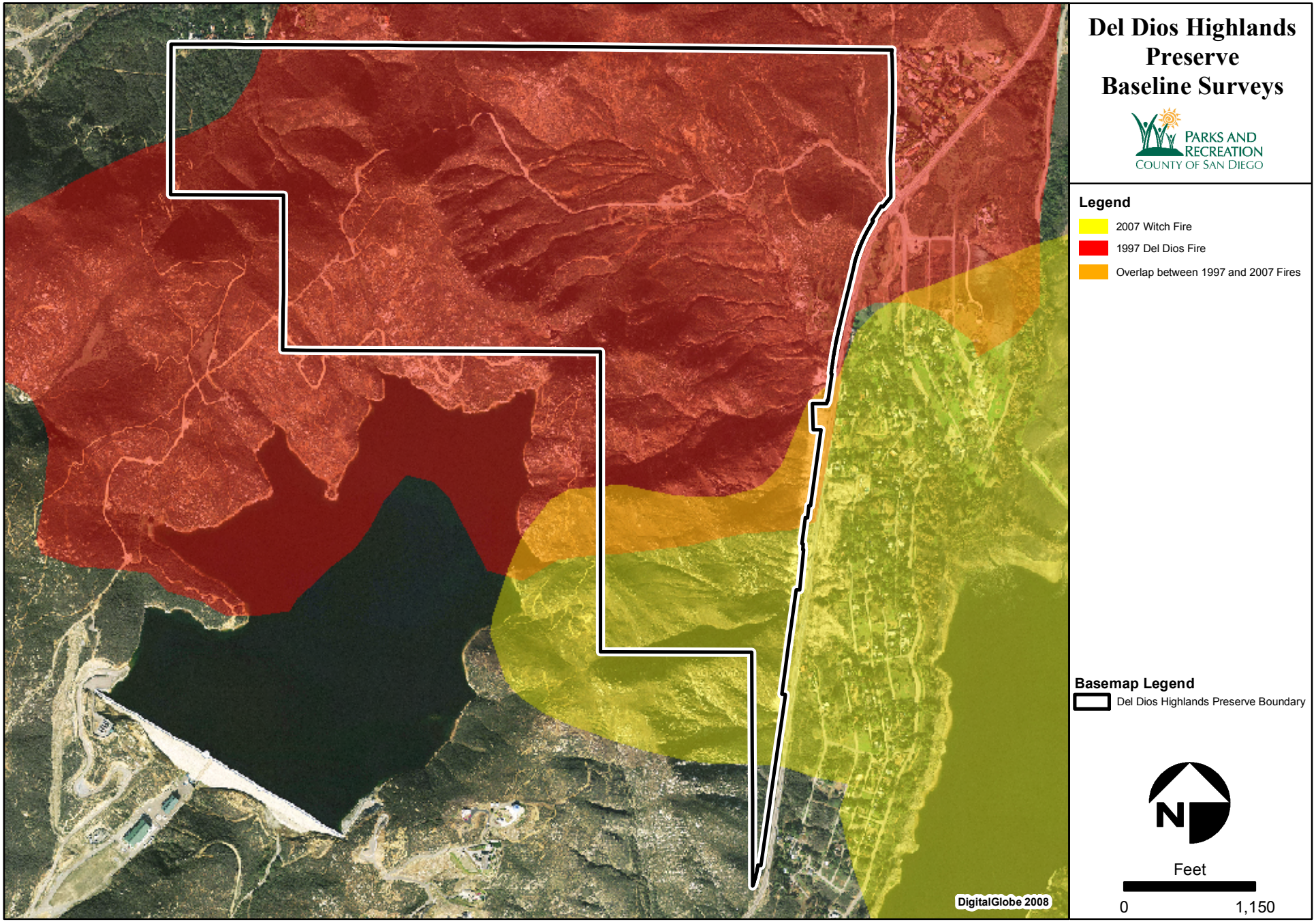
San Diego County and Southern California have a Mediterranean climate characterized by mild wet winters and arid summers. The average temperatures at the Preserve and adjacent areas range from approximately 55.3° Fahrenheit (F) (low) to 85.6°F (high) in the summer and approximately 38.5°F (low) to 69.6°F (high) in the winter (San Pasqual Valley Weather Station). In a normal year, precipitation averages 0.85 inches and falls mostly in the winter and spring (Western Regional Climate Center (WRCC 2007) Hodges Dam sampling station).

2.3.3 Hydrology

The Preserve is divided by several high ridges into three separate watersheds. Due to the stark topography and terrain of the Preserve and the multiple intersecting ridgelines, accumulated precipitation drains either east to the San Dieguito River (via Lake Hodges), north to Escondido Creek, or south and west to the Mt. Israel Reservoir (also known as the Emergency Storage Project Olivenhain Reservoir) (Figure 2). The majority of waters drain east to Lake Hodges, while water that falls in the northwestern corner of the Preserve drains northwest through the community of Del Dios and the Elfin Forest Preserve to Escondido Creek. Finally, all waters that fall along the southern and western corners of the Preserve drain to the artificial Olivenhain Reservoir where they are controlled by the Olivenhain Dam operated by the Olivenhain Municipal Water District (OMWD).

2.3.4 Fire History

Recent wildfires have been recorded on the Preserve in 2007 (Witch Creek Fire), as well as historic wildfire which has consumed all or portions of the Preserve in 1919, 1943, 1980, 1985, and 1990 (California Department of Forestry and Fire Protection, Fire Perimeter Data, 2008). The Witch Creek wildfire consumed portions of the eastern and southern parts of the Preserve in October 2007 (Figure 5); it also significantly affected the residential communities east of the Preserve.



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Recent Fire History

Figure 5

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Date: Oct 13, 2008

The Preserve is located in the Rancho Santa Fe Fire Protection District. In addition, the City of Escondido Fire Department services the residences adjacent to the northern and northeast areas of the Preserve.

2.4 Land Use

2.4.1 On-Site Land Use

A 1.43 mile multi-use (hiking, biking, and equestrian use) trail extends east-west across the Preserve originating from a staging area located off of Del Dios Highway in the northeast section of the Preserve. The trail continues into the Elfin Forest Preserve. In addition, a residence destroyed in the 2007 Witch fire is located in the eastern portion of the Preserve, along Del Dios Highway.

2.4.2 Adjacent Properties

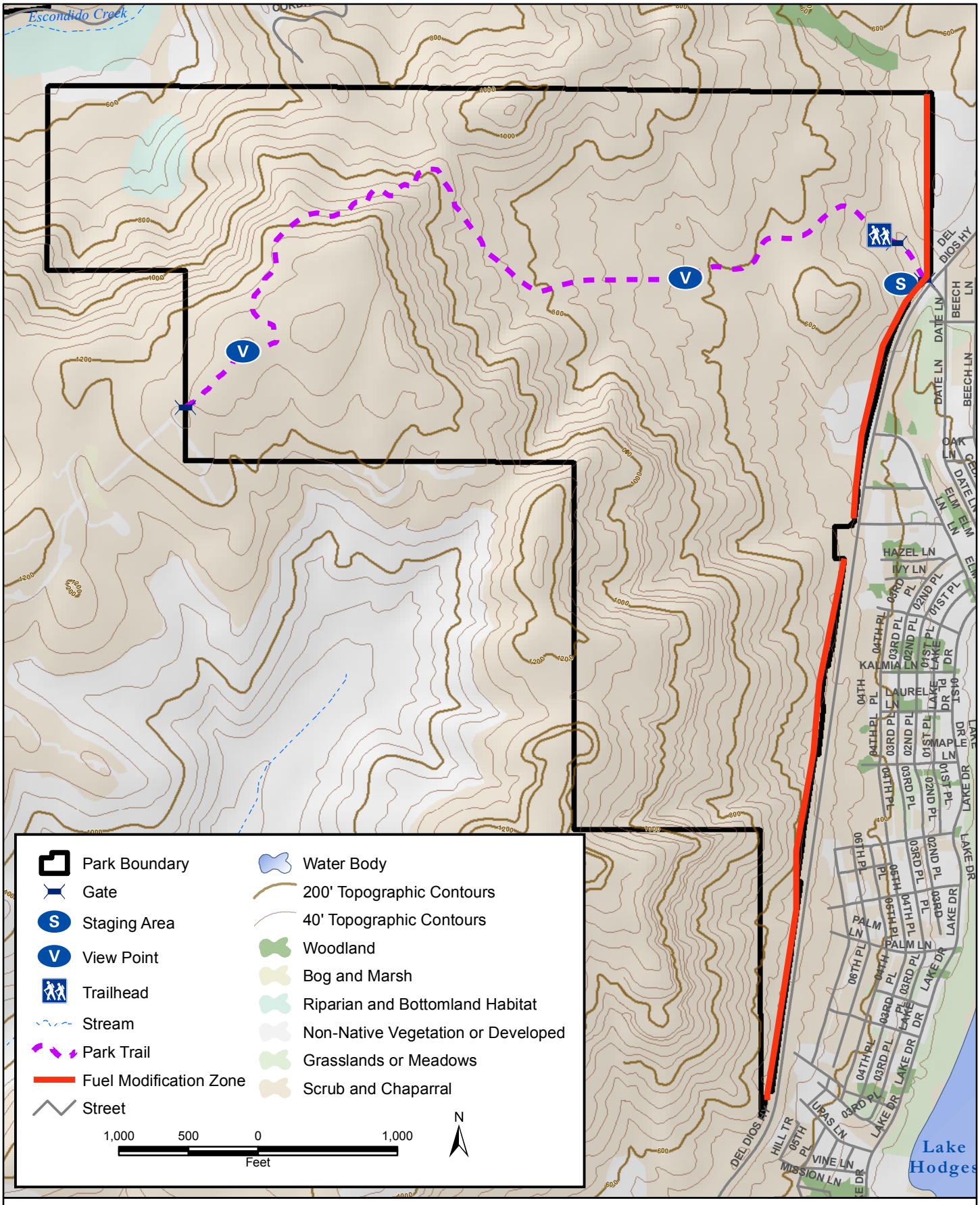
The Preserve lies approximately one-quarter mile west of the northernmost portion of Lake Hodges, a lake that was formed by the damming of the San Dieguito River. Del Dios Highway borders the Preserve to the east, the Elfin Forest Recreational Reserve property borders the Preserve to the west, the land around the Olivenhain Reservoir borders the Preserve to the south, and private land borders the Preserve to the north. The Elfin Forest Recreational Reserve property is owned and managed by Olivenhain Municipal Water District.

2.4.3 Easements or Rights

Several easements are present within the Preserve. San Diego Gas & Electric (SDG&E) retains an easement for a main overhead power line that traverses the Preserve from the southeastern area west through the middle of the Preserve into the adjacent Elfin Forest Recreational Reserve property. Olivenhain Municipal Water District (OMWD) maintains an easement for access roads on the western portion of the Preserve where the Preserve abuts the Elfin Forest Recreational Reserve property (owned by OMWD).

2.5 Trails

A multi-use trail (e.g. hiking, horseback riding, and mountain biking) approximately 1.43 miles in distance currently exists on the Preserve (Figure 6). The trail connects to the Elfin Forest Recreational Reserve property trail system to the west of the Preserve.



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COUNTY OF SAN DIEGO

Figure 6. Del Dios Highlands Preserve

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3.0 BIOLOGICAL RESOURCES DESCRIPTION

Technology Associates International Corporation (TAIC) assisted by the San Diego Natural History Museum, performed baseline biological surveys at the Preserve in the winter, spring, and summer of 2007 and 2008. The results of these surveys can be found in the biological resources report entitled, *Biological Diversity Baseline Report for the Del Dios Highlands Preserve*, dated November 2008, and attached as Appendix A. The surveys results were used in the preparation of this RMP.

A total of 153 wildlife species were documented from the Preserve during 2007 and 2008 baseline surveys. These include 14 species of butterflies, three species of amphibians, 15 species of reptiles, 92 species of birds, and 29 species of mammals. Thirty sensitive species were detected during baseline surveys, of which eleven are MSCP-covered species (ten wildlife species and one plant).

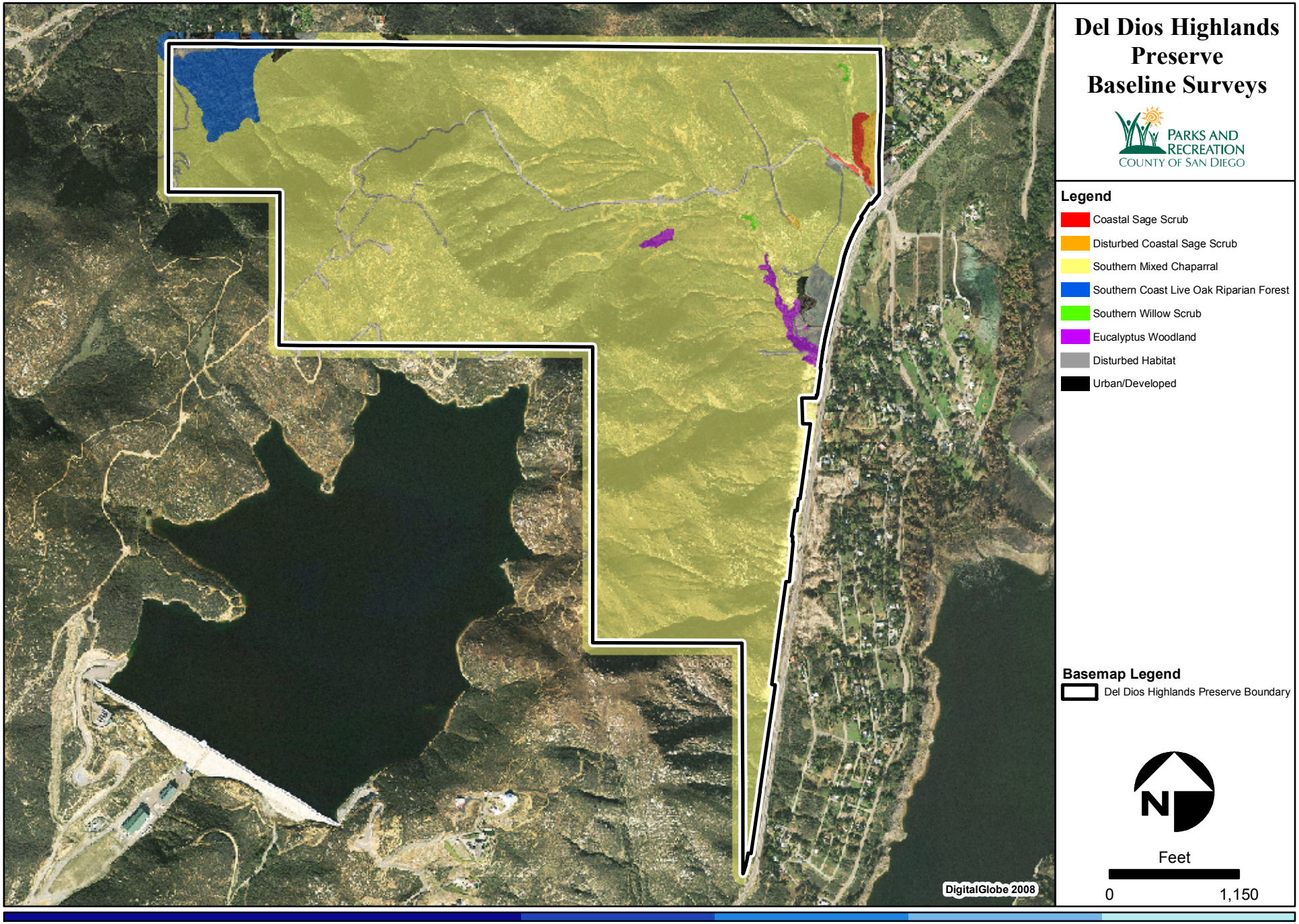
3.1 Vegetation Communities/Habitat

Seven vegetation communities were mapped within the Preserve during the 2007 and 2008 surveys (Figure 7, Table 1). The most abundant vegetation type within the Preserve, southern mixed chaparral, is located on much of the xeric (drier), more exposed southern and western facing slopes, as well as on open, northern facing slopes where soil moisture is limited by steep slopes and little shading. A few small patches of Diegan coastal sage scrub occur on the eastern side of the Preserve. Within the Preserve, Diegan coastal sage scrub occurs on level areas and within various mesic (wetter) uplands.

In the lower elevations of the Preserve near its northwestern corner there is a unique mature stand of southern coast live oak riparian forest located at the bottom of a riparian valley near Escondido Creek. In some locations southern coast live oak riparian forests may intergrade with coast live oak woodlands depending on conditions.

In a few small areas near the northeastern corner of the Preserve, the riparian community southern willow scrub is present within the channels of two ephemeral streams. These small patches are both minor in terms of size and function, but appear to indicate that at least occasionally these channels convey measurable volumes of water.

In addition to the natural communities within the Preserve, many human altered habitats also occur. Disturbed habitats which occur within the Preserve include unpaved trails and other largely unvegetated areas and areas of soil disturbance. Other, developed areas occur within the Preserve including existing structures, paved roads and parking areas, landscaped areas, and the foundation of a burnt homestead destroyed in the 2007 Witch Creek Fire. A brief description of each vegetation community is provided in the text below.



Technology Associates International Corporation

Vegetation Communities

Figure 7

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Date: Oct 13, 2008

Table 1. Vegetation Communities within the Preserve

Vegetation Community	Acres
Southern Coast Live Oak Riparian Forest	10.6
Southern Willow Scrub	0.4
Diegan Coastal Sage Scrub[1]	3.0
Southern Mixed Chaparral	439.5
Eucalyptus Woodland	3.1
Disturbed Habitat	10.7
Urban/Developed	1.5
TOTAL	**468.8**

[1] Includes 1.5 acres of disturbed coastal sage scrub.

Southern Coast Live Oak Riparian Forest (Holland Code 61310)

As described by Holland (1986), southern coast live oak riparian forest is a locally dense riparian forest dominated by coast live oak (*Quercus agrifolia* var. *agrifolia*). Southern coast live oak riparian forest occurs along an unnamed ephemeral drainage in the northwestern corner of the Preserve. At higher elevations in this drainage, southern coast live oak riparian forest appears to intergrade with southern mixed chaparral. Contrary to the Holland description, the southern coast live oak riparian forest present on the Preserve is unique and richer in understory shrubs and poorer in herbaceous vegetation than other riparian communities. This community is dominated by coast live oak with sub-dominant species including mountain mahogany, toyon, holly-leaved cherry, lilac (*Ceanothus* spp.), Eastwood manzanita, mission manzanita, scrub oak (*Quercus acutidens*), lemonade berry (*Rhus integrifolia*) and summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*). This vegetation community comprises approximately 10.6 acres of the Preserve.

Southern Willow Scrub (Holland Code 63320)

As described by Holland (1986), southern willow scrub is a dense broadleafed winter deciduous thicket dominated by several Salix species. Although most of the Preserve is too dry to support southern willow scrub, this community does occur in two small patches/clusters within two separate ephemeral drainages on the northeastern portion of the Preserve. The southern willow scrub on the Preserve consists entirely of black willow (*Salix gooddingii*) with a limited quantity of mule fat (*Baccharis salicifolia*) in its understory along with other southern mixed chaparral shrub species. Approximately 0.4 acre of southern willow scrub is present within the Preserve.

Diegan Coastal Sage Scrub (Holland Code 32500)

As described by Holland (1986) Diegan coastal sage scrub is a community dominated by drought deciduous soft-woody sub-shrub taxa frequently found on arid or steep sites. Diegan coastal sage scrub frequently intergrades with chaparral communities such as southern mixed chaparral at higher elevations. On the Preserve, Diegan coastal sage scrub is present in very limited distribution on the eastern side of the Preserve. This community is dominated by black sage in association with saw-toothed goldenbush (*Hazardia squarrosa* var. *grindelioides*), California buckwheat, toyon, and laurel sumac. Diegan coastal sage scrub and disturbed Diegan coastal sage scrub comprise approximately 3.0 acres of the Preserve.

Southern Mixed Chaparral (Holland Code 37120)

As described by Holland (1986), southern mixed chaparral is a dense, relatively short, shrub-dominated community widely distributed on arid landscapes in coastal southern California. Southern mixed chaparral is the dominant vegetation community on the Preserve. Present throughout most of the Preserve, southern mixed chaparral occurs on north and south facing slopes, ridges, and canyons. Southern mixed chaparral covers approximately 439.5 acres on the Preserve.

Southern mixed chaparral frequently intergrades with other shrub-dominated vegetation communities such as Diegan and Venturan coastal sage scrub. Wart-stemmed ceanothus (*Ceanothus verrucosus*) and mission manzanita (*Xylococcus bicolor*) are co-dominant in the southern mixed chaparral present on the Preserve. Other species characteristic of this association present within the Preserve include Eastwood manzanita (*Arctostaphylos glandulosa* ssp. *glandulosa*), chamise (*Adenostoma fasciculatum*), laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), mountain mahogany (*Cerocarpus minutiflorus*), holly-leaved cherry (*Prunus ilicifolia* ssp. *ilicifolia*), summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*), and Ramona lilac (*Ceanothus tomentosus*). Unique for this region is also the occurrence of the rare Encinitas baccharis within this vegetation community. Common coastal sage scrub species such as laurel sumac, black sage (*Salvia mellifera*) and California buckwheat (*Eriogonum fasciculatum* var. *foliolosum*) are also present in this association onsite, but at sub-dominant levels.

Eucalyptus Woodland (Holland Code 11100)

As described by Holland (1986), eucalyptus woodland is typically characterized by dense monotypic stands of eucalyptus trees (*Eucalyptus camaldulensis*). Plants in this genus, imported primarily from Australia, were originally planted in groves throughout many regions of coastal California as a potential source of lumber and building materials, for their use as windbreaks, and for their horticultural novelty. They have increased their cover through natural regeneration, particularly in moist areas sheltered from strong coastal winds. Gum trees naturalize readily in the state and, where they form dense stands, tend to completely supplant native vegetation, greatly altering community structure and dynamics.

Within the Preserve, eucalyptus woodland occurs near a burnt residence adjacent to Del Dios Highway and in a small cluster a few hundred feet south of the main access trail on the northeastern corner of the Preserve. Eucalyptus woodland habitat on the Preserve uncharacteristically consists of an understory of native southern mixed chaparral species. Approximately 3.1 acres of eucalyptus woodland occurs on the Preserve.

Disturbed Habitat (Holland Code 11300)

Disturbed habitat is any land on which the native vegetation has been significantly altered by agriculture, construction, or other land-clearing activities, and the species composition and site conditions are not characteristic of the disturbed phase of one of the plant associations within the study region.

Mostly, disturbed habitat within the Preserve was comprised of well worn unvegetated trails; however disturbed habitat was also observed to be present in a small area surrounding a burnt-down residence on the eastern edge of the Preserve along Del Dios highway. Dominant plant species observed within the disturbed areas of the Preserve included short-pod mustard (*Hirschfeldia incana*), sweet fennel (*Foeniculum vulgare*), tree tobacco (*Nicotiana glauca*), long-beak filaree (*Erodium botrys*), ripgut grass (*Bromus diandrus*), red brome (*Bromus rubens*), and tecolote (*Centaurea melitensis*). In addition, the disturbed habitat surrounding the burnt residence in the eastern portion of the Preserve, along Del Dios Highway supported several mature eucalyptus trees (*Eucalyptus camaldulensis*). Other species found within disturbed areas of the Preserve included African fountain grass (*Pennisetum setaceum*), Pampas grass (*Cortaderia selloana*), and skunkweed (*Navarretia hamata* ssp. *hamata*). Approximately 10.0 acres of disturbed habitat occurs within the Preserve.

Urban/Developed (Holland Code 12000)

Urban/developed areas are found where habitat has been altered by human activities to a state beyond the potential for recovery to a natural state. In general, free standing structures and surrounding areas that are paved, armored, or landscaped are considered developed. On the Preserve, developed lands include the foundation of a burnt residence, its paved driveway, ancillary structures, cistern tank, and immediate surroundings. This burnt homestead is located in the eastern portion of the Preserve, along Del Dios Highway. In addition, developed areas included discrete areas of ornamental landscaping within the Preserve boundaries included areas of planted non-native trees and shrubs including assorted eucalyptus (*Eucalyptus* spp.), ornamental acacia (*Acacia baileyana*), Peruvian pepper tree (*Schinus molle*), and jade plant (*Crassula ovata*). Approximately 1.5 acres of urban/developed land occurs within the Preserve.

3.2 Plant Species

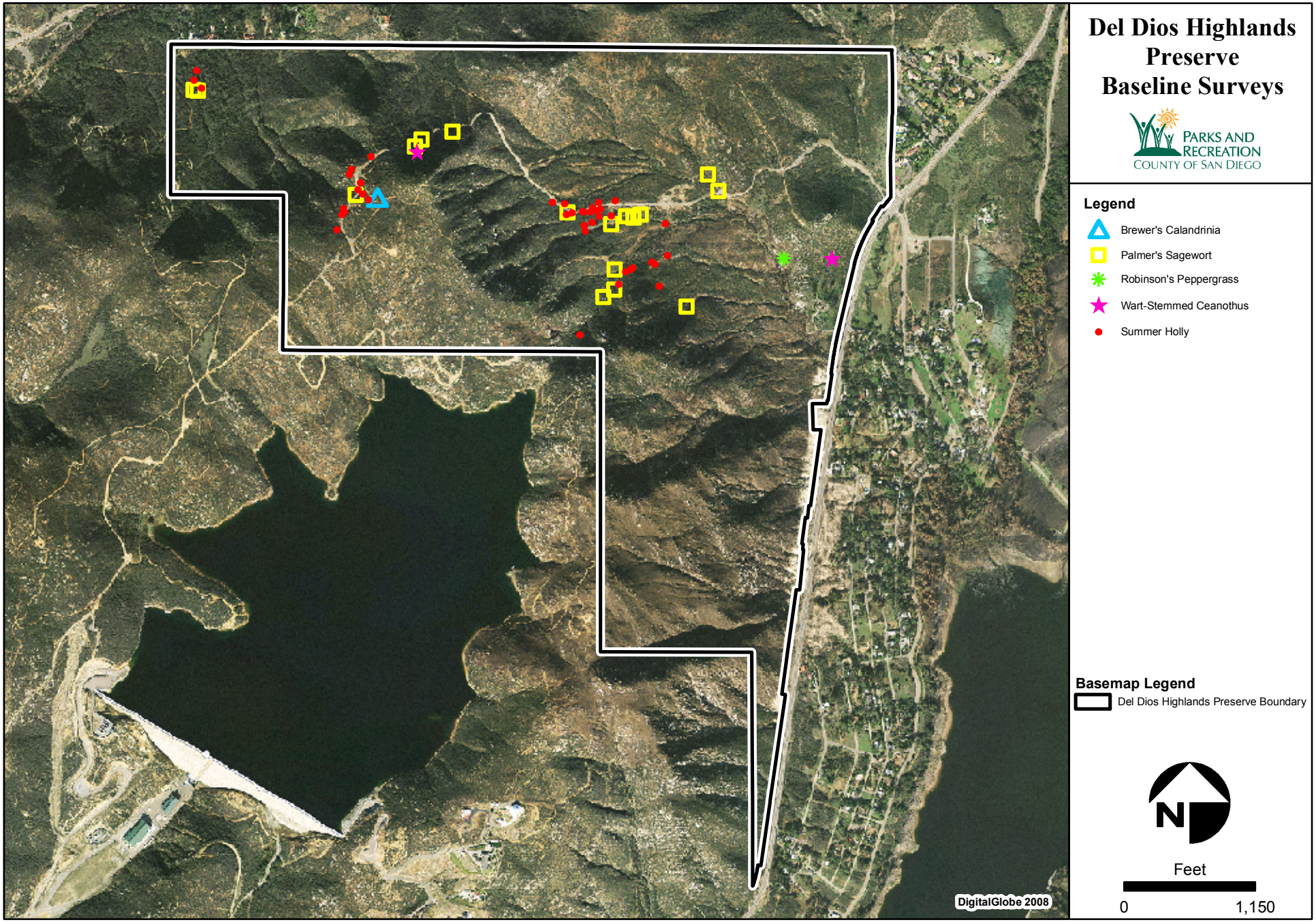
3.2.1 Plant Species Present

A total of 213 plant taxa were documented within the Preserve during 2007 and 2008 surveys. Fifty-seven of these were non-native species. The remaining species (about 73 percent) consist of a diverse array of native riparian and upland plants that occur in natural assemblages as described below. The Baseline Biological Resources Evaluation (Appendix A) includes the complete list of all species observed during the 2007 and 2008 surveys.

3.2.2 Rare, Threatened, or Endangered Plant Species Present

A special-status plant species is one listed by federal or state agencies as threatened or endangered; considered to be of special status by one or more special interest groups, such as the California Native Plant Society (e.g., CNPS List 1, 2, 3, and 4 Plant Species); is included on the County's Sensitive Plant list (Group A, B, C, or D Listed Plants); or is covered under the MSCP.

Five sensitive plant taxa were detected within the Preserve during the 2008 surveys (Figure 8). These include Brewer's calandrinia (*Calandrinia breweri*), Palmer's sagewort (*Artemisia palmeri*), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*), wart-stemmed ceanothus (*Ceanothus verrucosus*), and summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*). Each of these species is addressed below in more detail.



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Sensitive Plant Species Observed during 2008 Baseline Surveys

Figure 8

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Date: Oct 13, 2008

Palmer's sagewort (*Artemisia palmeri*)

CNPS List 4.2, San Diego County Group D

Palmer's sagewort is an aromatic herb typically located in perennial creeks and drainages near the coast (Reiser 1994). In California, Palmer's sagewort is found only in San Diego County (CNPS 2008). This species is found in a wide range of habitat types including chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland in sandy, mesic conditions between 15 and 915 meters (50-3,000 ft) in elevation (CNPS 2008). Palmer's sagewort is most often found in a riparian context. Palmer's sagewort grows within a shaded understory beneath willow, sycamore, or cottonwood canopy.

Occasionally it also is present beneath *Quercus agrifolia* canopy, but in decidedly mesic circumstances (Reiser 1994). Within the Preserve, Palmer's sagewort was observed throughout the central portion and northwestern portion of the Preserve.

Brewer's calandrinia (*Calandrinia breweri*)

CNPS List 4, San Diego County Group D

In California, Brewer's calandrinia is found in San Diego, Los Angeles, San Bernardino, Contra Costa, Mendocino, Monterey, Mariposa, Marin, Napa, Santa Barbara, Santa Clara, Santa Cruz, San Luis Obispo, San Mateo, Sonora, and Ventura counties (Reiser 1994). The species is a fire-follower and typically reported in areas of recently burned chaparral and coastal sage scrub (Reiser 1994) on sandy or loamy soils (CNPS 2008). Brewer's calandrinia is apparently rare in Southern California and its populations are presumed to be declining due to loss of habitat along the coast (Reiser 1994). Within the Preserve, Brewer's calandrinia was observed in the northwestern portion of the Preserve.

Wart-stemmed ceanothus (*Ceanothus verrucosus*)

CNPS List 2.2, San Diego County Group B, MSCP Covered Species

Wart-stemmed ceanothus is a large, evergreen shrub typically located in coastal chaparral intermixed with chamise and mission manzanita (CNPS 2008, Reiser 1994). Typically, this species is a dominant shrub within the vegetation community where it occurs. It may be particularly vigorous on north-facing slopes, but can accommodate more xeric aspects (Reiser 1994). The species occurs between up to 380 meters (1,250 ft) in elevation (CNPS 2008) and is known from records in San Diego County and Baja California, Mexico (Reiser 1994). Once regionally abundant within the coastal canyons of the county, the species has been substantially reduced in numbers because of urban sprawl. Within the Preserve, wart-stemmed ceanothus

was observed near the eastern boundary and in the northwestern portion of the Preserve.

Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)

CNPS List 1B.2, San Diego County Group A

Summer holly is a large, showy, perennial shrub found in chaparral and cismontane woodland habitats between 30 and 550 meters (100-1,800 ft) in elevation (Reiser 1994, CNPS 2008). This species is usually found in southern mixed chaparral on mesic north-facing slopes (Reiser 1994) and is known from records in San Diego, Riverside, and Orange counties and Baja California, Mexico (Reiser 1994). Summer holly is declining throughout its U.S. range where the species is threatened by residential development (Reiser 1994). Within the Preserve, summer holly was observed throughout the central portion and northwestern portion of the Preserve.

Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*)

CNPS List 1B.2, San Diego County Group A

Robinson's pepper-grass occurs in San Diego, Riverside, Orange, Los Angeles, San Bernardino, and Santa Barbara counties, on Santa Cruz Island, and in Baja California, Mexico (Reiser 1994). Robinson's pepper-grass occurs in chaparral and coastal scrub habitats between 1 and 885 meters (3.3-2,900 ft) in elevation (CNPS 2008). This annual herb grows in openings in chaparral and coastal sage scrub, generally well away from the coast in Southern California in foothill landscapes. Typically sites where this species is observed are relatively dry, exposed locales, rather than beneath a shrub canopy or along creeks (Reiser 1994). Robinson's pepper-grass was observed in the northeastern portion of the Preserve.

3.2.3 Rare, Threatened, or Endangered Plant Species not Observed but with High Potential to Occur

Six sensitive species described below have been previously documented or have a high potential to occur within the Preserve.

Encinitas Baccharis (*Baccharis vanessae*)

Federally Threatened, State Endangered, CNPS List 1B.1, San Diego County Group A, MSCP Covered Species

Although surveys for this species were conducted during the flowering period to allow conclusive identification, the effects of the 2006/2007 drought prevented this

plant to flower and the stems were mostly leafless and dormant as well, thus precluding conclusive identification.

Sea dalia (*Coreopsis maritima*)

CNPS List 2.2, San Diego County Group B

Sandstone cliffs near the ocean are the preferred microhabitat of sea dahlia. Presumably, the moist sea breezes are a significant factor in providing optimal habitat for this perennial with semi-succulent leaves. Typically sea dahlia is observed on highly eroding slopes where competition from other shrubs is limited (Reiser 1994).

San Diego sand aster [Del Mar sand aster] (*Corethrogyne filaginifolia* var. *incana*; currently placed in *Corethrogyne filaginifolia* var. *filaginifolia*)

CNPS List 1B.1, San Diego County Group A

Coastal mixed chaparral in sandy, open locales is the preferred habitat for this species. The Del Mar sand aster has a preference for mildly disturbed soils and will pioneer on recently cleared chaparral sites with sandstone substrates (Reiser 1994).

California adolphia (*Adolphia californica)*

CNPS List 2.1, San Diego County Group B

This short shrub is often intermixed with Diegan sage scrub, but occasionally occurs in peripheral chaparral habitats, particularly hillsides near creeks. The California adolphia is usually associated with *Eriogonum fasciculatum* and *Artemisia californica* in xeric locales where shrub canopy reaches four or five feet in height.

Nuttall's scrub oak (*Quercus dumosa*)

CNPS List 1B.1, San Diego County Group A

Coastal chaparral with a relatively open canopy cover in flat terrain is the preferred habitat for this species; on north-facing slopes this shrub may grow in dense stands.

3.2.4 Non-native and/or Invasive Plant Species

California Invasive Plant Council (Cal-IPC) listed plants were identified during the field surveys. These invasive nonnative plants include: giant reed (*Arundo donax*), pampas grass (*Cortaderia selloana*), sweet fennel (*Foeniculum vulgare*), tamarisk (*Tamarix ramosissima*), Mexican fan palm (*Washingtonia robusta*), Peruvian pepper

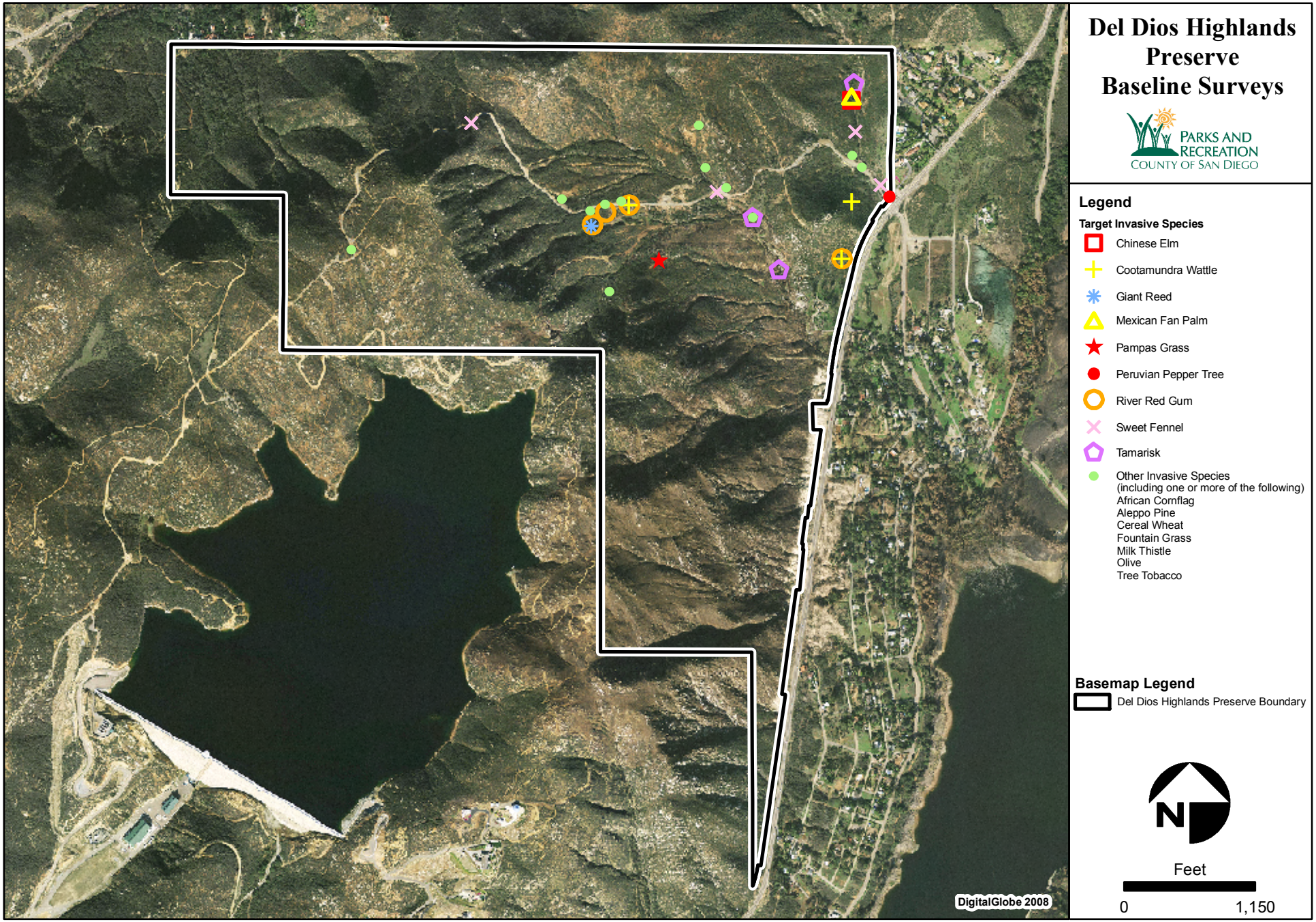
tree (*Schinus terebinthifolius*), and eucalyptus (*Eucalyptus camaldulensis*) (Figure 9). The individual nonnative invasive plant species were found in patches less than 0.1 acre. Groups of non-native species ranged in coverage from 0.3 to 1.75 acres.

Cal-IPC ranks giant reed, pampas grass, sweet fennel, and tamarisk as "high" alert species. These species were found sporadically in the southern mixed chaparral and southern willow scrub habitat within the Preserve. These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Cal-IPC ranks Mexican fan palm as a "moderate" alert species. These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread. One occurrence of Mexican fan palm was found in southern willow scrub habitat located in the northeastern area of the Preserve.

Cal-IPC ranks Peruvian pepper tree and eucalyptus as "limited" alert species. These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic. These species were found in disturbed habitat and eucalyptus woodland within the Preserve.

Cootamundra wattle (*Acacia baileyana*), an invasive nonnative plant not ranked by Cal-IPC was found in large numbers within the Preserve adjacent to the Derbas house site.



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Invasive Plant Species

Figure 9

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Date: Oct 13, 2008

3.3 Wildlife Species

3.3.1 Wildlife Species Present

Invertebrates

A complete list of invertebrate species identified on the Preserve below the level of family is included in the faunal list of the Baseline Biological Resources Evaluation (Appendix A). No special-status butterfly species or other invertebrate species were detected during the 2007 and 2008 surveys and no special-status invertebrate species have high potential to occur at the Preserve.

Butterflies

Fourteen butterfly species were detected within the Preserve. These species include: funereal duskywing (*Erynnis funeralis*), acmon blue (*Plebejus acmon acmon)*, bramble hairsteak (*Callophrys dumetorum dumetorum*), lupine blue (*Plebejus lupine monticola*), uckeye (*Junonia coenia*), Lorquin's admiral (*Limenitis lorquini*), painted lady (*Cynthia cardui*), West Coast lady (*Cynthia annabella*), anise swallowtail (*Papilio zelicaon*), pale swallowtail (*Papilio eurymedon*), common (checkered) white (*Pieris protodice*), Sara orangetip (*Anthocharis sara sara*), orange sulfer (*Colias eurytheme*), and Behr's metalmark (*Apodemia mormo virgulti*).

Other Invertebrates

Other invertebrate species captured in the pitfall traps associated with the herpetological arrays or during other fieldwork were identified in the field or photographed and identified in the Consultant's office. No invertebrate species were collected. The Baseline Biological Resources Evaluation (Appendix A) includes a list of all invertebrate species captured in the herpetological arrays or during active herpetological searches and identified below to the family level.

Amphibians

The array of pitfall traps captured two amphibian species during the 2007 sampling period at the Preserve. There is two native species, western spadefoot toad (*Spea hammondii*) and western toad (*Bufo boreas*). One other native amphibian species, Pacific chorus frog (*Pseudacris regilla*), was detected during active searches.

Reptiles

Seven reptile species were detected during 2007-2008 sampling at the Preserve including: coast horned lizard (*Phrynosoma coronatum*), Gilbert's skink (*Eumeces gilberti*), orange-throated whiptail (*Cnemidophorus hyperythrus*), side-blotched lizard (*Uta stansburiana*), southern alligator lizard (*Elgaria multicarinata*), western fence lizard (*Sceloporus occidentalis*), and western whiptail (*Cnemidophorus tigris*).

Snake species detected within the Preserve during the 2007-2008 sampling period included: gopher snake (*Pituophis catenifer*), California whipsnake (*Masticophis lateralis*), night snake (*Hypsiglena torquata*), red diamond rattlesnake (*Crotalus rubber*), ringneck snake (*Diadophis punctatus*), rosy boa (*Lichanura trivirgata*), western patched-nosed snake (*Salvadora hexalepis*), and western rattlesnake (*Crotalus viridis*).

Birds

In total, 89 bird species were detected during point count surveys within the Preserve. The eucalyptus and other surviving exotic trees at this site provided the only habitat in the Preserve for certain arboreal birds, namely, the acorn woodpecker, Cassin's kingbird, European starling, hooded oriole, and Bullock's oriole. Nesting of the Cassin's kingbird and hooded oriole (both urban adapters) was noted in the northeastern area of the Preserve and nowhere else in the Preserve. Species diversity in the central portion of the Preserve was relatively high because of more mesic vegetation growing in a disturbed area. Species diversity was lowest in the more level chaparral toward the east edge of the Preserve, lying at a greater distance from developed areas and water. A complete list of avian species observed within the Preserve during the 2007-2008 surveys is included in the faunal list of the Baseline Biological Resources Evaluation (Appendix A).

Species most frequently observed during the surveys included Bewick's wren (*Thryomanes bewickii*), California towhee (*Pipilo crissalis*), and wrentit (*Chamaea fasciata*), all characteristic and common birds of chaparral. These species were also three of the most widely distributed species, being observed at all of the avian point count locations. In addition to these species, the spotted towhee (*Pipilo maculatus*) and Anna's hummingbird (*Calypte anna*) were both observed at all avian point count locations.

Species least frequently observed during surveys included American robin (*Turdus migratorius*), calliope hummingbird (*Stellula calliope*), common loon (*Gavia immer*), dark-eyed junco (*Junco hyemalis*), ferruginous hawk (*Buteo regalis*), great blue heron (*Ardea herodias*), greater roadrunner (*Geococcyx californianus*), Hutton's vireo (*Vireo huttoni*), killdeer (*Charadrius vociferus*), Lawrence's goldfinch (*Carduelis lawrencei*), peregrine falcon (*Falco peregrinus*), pine siskin (*Carduelis pinus*), purple finch (*Carpodacus purpureus*), red-shouldered hawk (*Buteo lineatus*), Say's phoebe (*Sayornis saya*), Townsend's warbler (*Dendroica townsendi*), Vaux's swift (*Chaetura vauxi*), western bluebird (*Sialia mexicana*), western wood pewee (*Contopus sordidulus*), white-faced ibis (*Plegadis chihi*), yellow warbler (*Dendroica petechia*), and yellow-breasted chat (*Icteria virens*). All of these species were also the least widely distributed species, being observed at one location. In addition, Bullock's oriole (*Icterus bullockii*), common yellowthroat (*Geothlypis trichas*), Cooper's hawk (*Accipiter cooperii*), and European starling (*Sturnus vulgaris*) were all observed at only one location.

Three species were detected during nocturnal surveys including barn owl, common poorwill, and great horned owl.

The birds observed at the Preserve are largely those characteristic of chaparral in coastal southern California. Species characteristic of woodland or developed areas were less frequent but intruded because of nearby oak and riparian woodland along Escondido Creek and developed areas in the Preserve. At the beginning of the survey in November 2007 numbers of birds were low, presumably as a result of the preceding years of drought and Witch Creek Fire of October 2007, which burned the southeast area of the Preserve. Even in areas of the Preserve not burned, the vegetation on east-facing slopes looked dried and unattractive to birds. There was virtually no evidence of birds from the burned areas to the east being displaced into the Preserve. The only exception was the coastal California gnatcatcher (*Polioptila californica;* CAGN). The population center for CAGN in San Diego County is around Lake Hodges a short distance east of the Preserve. Single individuals were noted three times during surveys. Also two males were seen together in early 2008, in the Elfin Forest Recreational Reserve property just west of the Preserve. The Preserve lacks the sage scrub habitat this species prefers for nesting.

Mammals

A complete list of mammal species observed within the Preserve during the 2007 - 2008 surveys is included in the faunal list of the Baseline Biological Resources Evaluation (Appendix A).

Small Mammals

A total of 474 small mammal captures representing ten species were recorded during three trapping sessions using live Sherman traps. Of the ten species captured using Sherman traps, the cactus mouse (*Peromyscus eremicus*) and California mouse (*Peromyscus californicus*) were the most frequently captured species. Botta's pocket gopher (*Thomomys bottae*) was not captured during small mammal trapping. However, pocket gopher burrows were observed throughout the property during baseline surveys.

Small mammal species were also captured during terrestrial herpetofauna pitfall sampling. A total of 30 small mammal captures representing six species were recorded during the sampling period. Of these six species, four species were captured only during pitfall sampling. These species include the western harvest mouse (*Reithrodontomys megalotis*), desert grey shrew (*Notiosorex crawfordi*), and ornate shrew (*Sorex ornatus*). In addition, an unknown species of rabbit (*Sylvilagus* ssp.) was captured during pitfall sampling.

Medium and Large Mammals

A total of five medium and large mammals were detected in the Preserve during the 2007-2008 surveys including: Southern mule deer (*Odocoileus hemionus fuliginata*), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), desert cottontail (*Sylvilagus audubonii*), and domestic dog (*Canis lupus familiaris*).

Bats

A total of 11 bat species were detected using passive Anabats during the three seasons of bat monitoring. The most active bat species detected were the Mexican free-tailed bat (*Tadarida brasiliensis*), Yuma myotis (*Myotis yumanensis*), and pocketed free-tailed bat (*Nyctinomops femorosaccus*). Species rarely detected included the western yellow bat (*Lasiurus xanthinus*), hoary bat (*Lasiurus cinereus*), and small-footed myotis (*Myotis ciliolabrum*).

In addition, an incidental observation of a dead hoary bat was made during pitfall sampling. The individual was found dead along Escondido Creek, on the trail leading from the Elfin Forest Recreational Reserve property into the Preserve.

Bat species detected during all three seasons of monitoring included the Mexican free-tailed bat, pocketed free-tailed bat, California myotis (*Myotis californicus*), western pipistrelle (*Parastrellus hesperus*), and western mastiff bat (*Eumops perotis*). Bat species detected only during the summer included the big brown bat (*Eptesicus fuscus*), western red bat (*Lasiurus blossevillii*), small-footed myotis, and western yellow bat. No bat species detected were limited to the winter or spring monitoring periods.

3.3.2 Rare, Threatened, or Endangered Wildlife Species Present

This section discusses special-status wildlife species observed at the Preserve (Figures 10-14). A special-status wildlife species is one listed by federal or state agencies as threatened or endangered; is included on the County's Sensitive Animal List (Group 1 or 2 Species); or is covered under the MSCP. Fourteen special-status wildlife species were detected at the Preserve. Each of these 14 species is addressed below in more detail.

Western spadefoot (*Spea hammondii*)

State Species of Special Concern, San Diego County Group 2

The western spadefoot is almost endemic to California, ranging from the Central Valley and southward on the coastal slope from Point Conception to northern Baja California (Jennings and Hayes 1994). It generally occurs below 3,000 feet (914 m), but can be found as high as 4,500 feet (1,372 m). This species prefers grassland, scrub, and chaparral habitat; occasionally occurring in oak woodlands. During the

breeding season (January to May), vernal pools or slow flowing creeks must be available for egg laying and larval development. The greatest threats to this species are loss and fragmentation of habitat due to urban and agricultural development, non-native predators, heavy grazing, off-road vehicles use, and contaminant runoff. Within the Preserve, the western spadefoot was captured on a south-facing slope composed of sparse southern mixed chaparral (Figure 10).

Orange-throated whiptail (*Cnemidophorus hyperythrus*)

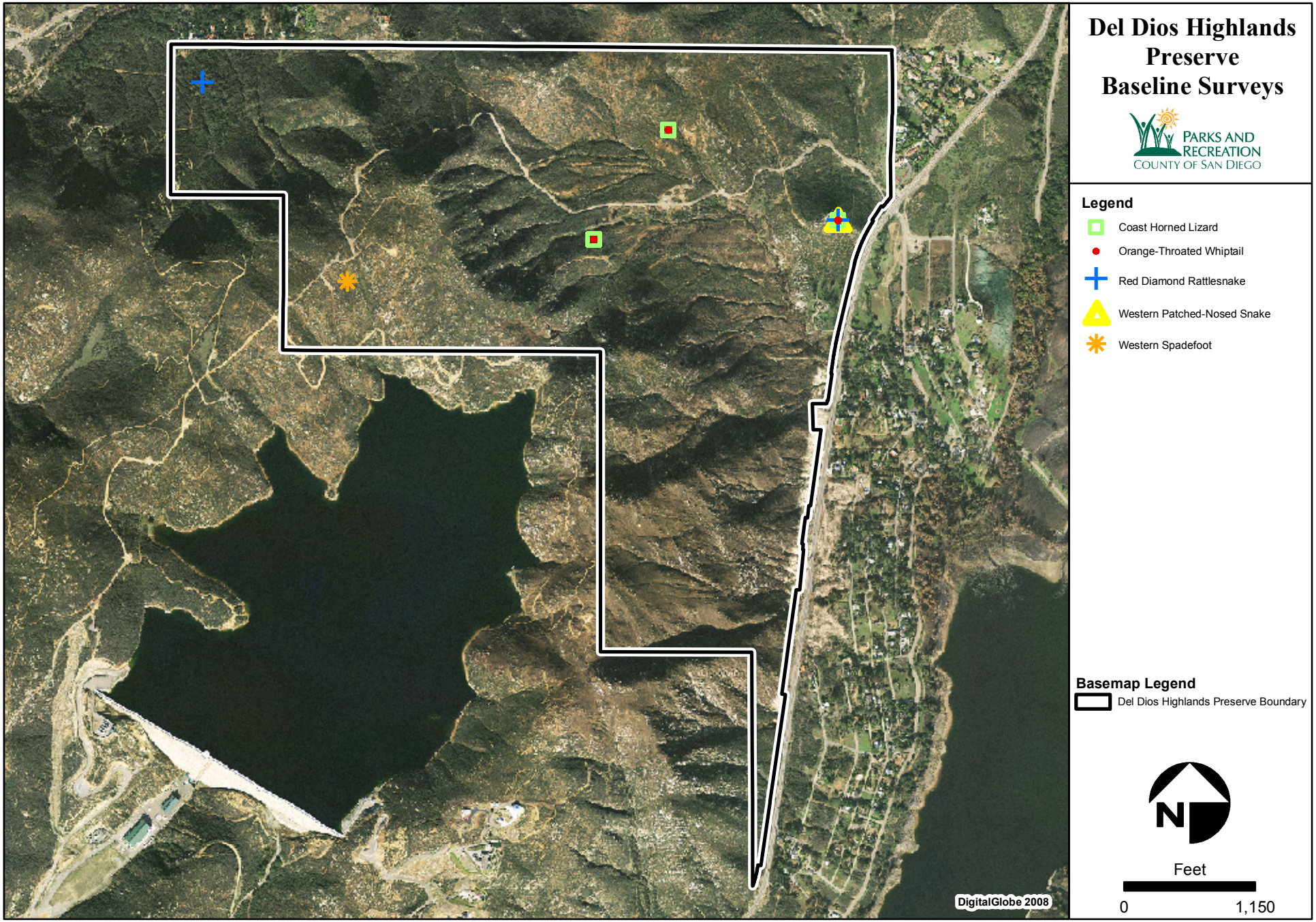
State Species of Special Concern, San Diego County Group 2, MSCP Covered Species

The orange-throated whiptail inhabits low-elevation coastal scrub, chamise-redshank chaparral, mixed chaparral, and valley-foothill hardwood habitats. This species is restricted to the extreme southwest of California and northwest of Baja California Norte, Mexico (Stebbins 2003). In California, it is found on the west side of the Peninsular Ranges between sea level and 3,000 feet (915 m), in Los Angeles, San Bernardino, Orange, Riverside and San Diego counties (Zeiner et al. 1988). It is still locally common in many areas where it remains. The principal threat to the orange-throated whiptail is degradation and loss of habitat; however, it is also impacted by off-road vehicle activity, over-grazing by livestock, and predation by introduced predators (e.g., cats and dogs). A limiting factor to the species' range is the availability of its primary food item, the termite (*Reticulitermes hesperus*). Within the Preserve, the orange-throated whiptail was captured in the eastern and central portions of the Preserve (Figure 10).

Red diamond rattlesnake (*Crotalus rubber*)

State Species of Special Concern, San Diego County Group 2

The red diamond rattlesnake is found in southwestern California from the Morongo Valley west to the coast and south along the peninsular ranges to mid Baja California, Mexico. This heavy bodied species inhabits coastal chaparral, oak and pine woodlands, grasslands, arid scrub, and cultivated areas. Dense vegetation with rocky areas and an abundance of burrowing small mammals are important habitat factors for this species. In addition to small mammals, this species preys on lizards and birds. This species is inactive during cooler winter months. The primary threats to this species are loss of habitat. Within the Preserve, the red diamond rattlesnake was captured in the eastern and western portions of the Preserve (Figure 10).



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Sensitive Herpetofauna Species Observed during 2008 Baseline Surveys

Figure 10

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Coast horned lizard (*Phrynosoma coronatum*)

State Species of Special Concern, San Diego County Group 2, MSCP Covered Species

The coast horned lizard occurs from northern California to the tip of Baja California, Mexico (SDNHM 2008) from sea level to approximately 8,000 feet (2,438 m). This lizard occupies open habitats such as grasslands, coastal sage scrub, and chaparral, with loose soils. Horned lizards forage on the ground in open areas, often between shrubs and near ant nests (Morey 2000). They are also commonly found along dirt roads and trails. Current threats to the species include destruction of coastal habitat, introduction of non-native ant species, especially the Argentine ant (*Iridomyrmex humilis*), which displace its native ant food base, collection, and off-road activity. Within the Preserve, coast horned lizard captures were made frequently at arrays located in the eastern and central portions of the Preserve (Figure 10).

Western patch-nosed snake (*Salvadora hexalepis*)

State Species of Special Concern, San Diego County Group 2

The western patch-nosed snake occurs in California from the northern Carrizo Plains in San Luis Obispo County, south through the coastal zone, south and west of the deserts, into coastal northern Baja California up to 7,000 feet (2,120 m) in elevation (Marlow 2005). It occurs in semi-arid brushy areas within chaparral, desert scrub, washes, and sandy flats and rocky areas (Marlow 2005). This species seems to require at least a low shrub structure of minimum density; it is not found in habitats lacking this habitat characteristic (Jennings and Hayes 1994). An opportunistic predator, it will prey on lizards (*Cnemidophorus* ssp., *Coleonyx* ssp.), small mammals (*Dipodomys* ssp.), and the eggs of lizards and snakes (Stebbins 1985, Zeiner et al. 1988). It probably eats anything it can overpower (Stebbins 1954). This species is normally active in the spring and early summer, with the greatest activity occurring in May and June (Marlow 2005). Within the Preserve, the western patch-nosed snake was captured at the array located in the eastern portion of the Preserve (Figure 10).

Cooper's hawk (*Accipiter cooperii*)

State Watch List, San Diego County Group 1, MSCP Covered Species

The Cooper's hawk is distributed throughout much of the United States from southern Canada to northern Mexico. It is a regular nesting species in San Diego County. This species has previously been closely associated with oak woodland, and the densely foliaged crowns of the coast live oak remain a favored site for Cooper's hawks to place their nests. Recently, however, Cooper's hawks have adapted to the urban environment and often nest in eucalyptus trees. Additionally,

they can be observed foraging in many types of upland and riparian habitats. Habitat loss, pesticide contamination, and human disturbance at the nest site limit this species population sizes (Remsen 1978). Within the Preserve, Cooper's hawk was observed at the point count location in the northeastern area of the Preserve (Figure 11).

Sharp-shinned hawk (*Accipiter striatus*)

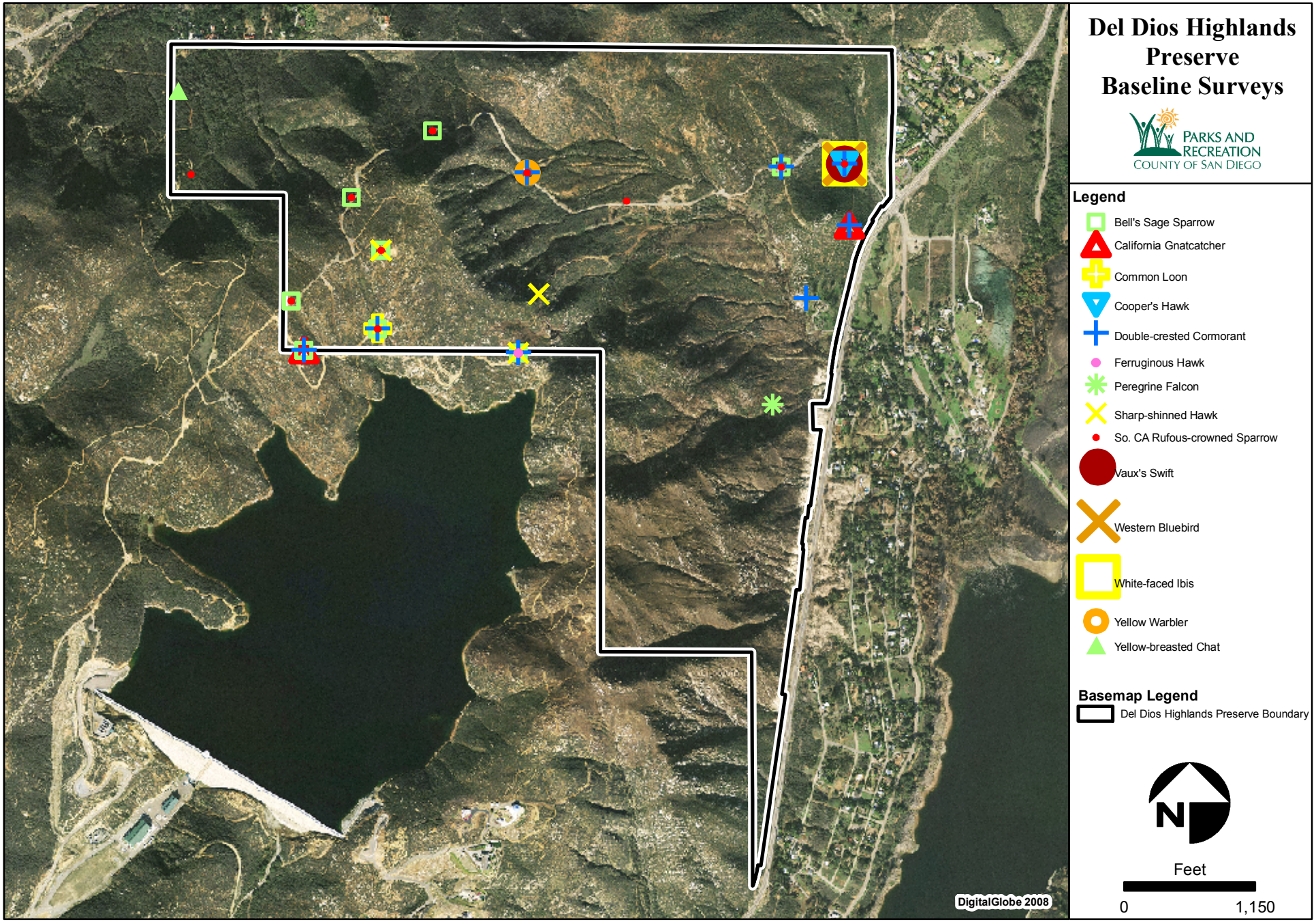
State Watch List, San Diego County Group 1

The sharp-shinned hawk breeds from central and western Alaska and the greater portion of Canada south to central and south-central California, central Arizona, New Mexico, Texas, northern parts of the Gulf states, and into Mexico (American Ornithologists' Union 1998). In California, sharp-shinned hawks breed throughout the state, including the mountains of southern California, but the majority probably breed in the northern half of the state (Small 1994). In California this species typically nests in coniferous forests, often within riparian areas or on north-facing slopes (USFS 2008). Nests are often near water and are typically in close proximity to open areas (Zeiner et al. 1990). The nest is a large, well-built structure of twigs, typically located in a tree crotch 10–60 feet (3–18 m) high (Baicich and Harrison 1997). Breeding Bird Survey data over the last 20 years (1980-2000) indicate a significant decline in sharp-shinned hawk populations in California (Sauer et al. 2001). Within the Preserve, the sharp-shinned hawk was observed at the point count locations in the western portions of the Preserve (Figure 11).

Southern California rufous-crowned sparrow (*Aimophila ruficeps*)

State Watch List, San Diego County Group 1, MSCP Covered Species

The southern California rufous-crowned sparrow is a common resident of scrub habitats of the coastal plain and foothills of southern California and Baja California, Mexico. It is locally common in open coastal sage scrub in San Diego County, and often occurs on slopes that are steep, sparsely vegetated, and rocky or recently burned. Urban development is greatest threat to this species due to the loss, degradation, and fragmentation of coastal sage scrub habitat and associated edge effects. Within the Preserve, the southern California rufous-crowned sparrow was observed at point count locations throughout the Preserve (Figure 11).



Technology Associates International Corporation

Sensitive Birds Species Observed during 2008 Baseline Surveys

Figure 11

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Date: Oct 13, 2008

Bell's sage sparrow (*Amphispiza belli*)

State Watch List, San Diego County Group 1

The sage sparrow is distributed in arid areas of the western United States and Mexico. Bell's sage sparrow, a dark colored subspecies, occurs year round in the western two thirds of San Diego County. This subspecies tends to forage on the ground, and as such, prefers open coastal sage scrub or chaparral habitat. It is often found in areas that are recovering from fire. Breeding activity generally occurs from late March through June. Nest building occurs low down in the brush, and sometimes on the ground. The greatest threat to the Bell's sage sparrow is habitat fragmentation resulting from urban development. This subspecies may be the most sensitive shrubland bird to habitat fragmentation (Bolger et al. 1997, Lovio 1996). Within the Preserve, the Bell's sage sparrow was observed at point count locations throughout the Preserve (Figure 11).

Ferruginous hawk (*Buteo regalis*)

State Watch List, San Diego County Group 1, MSCP Covered Species

The ferruginous hawk is an uncommon winter resident and migrant at lower elevations and open grasslands in the Modoc Plateau, Central Valley, and Coast Ranges (Polite and Pratt 2005). The species is fairly common winter resident of grasslands and agricultural areas in southwestern California (Garrett and Dunn 1981). In San Diego County, about 100 individuals reach the county annually (Unitt 2004). This species frequents open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats (Polite and Pratt 2005). Loss of extensive grasslands, overgrazing, and indiscriminate use of rodenticides threaten this species (Unitt 2004). Within the Preserve, the ferruginous hawk was observed at the point count location in the southwestern portion of the Preserve (Figure 11).

Vaux's swift (*Chaetura vauxi*)

State Species of Special Concern

In North America, the Vaux's swift breeds from southeast Alaska, British Columbia, northern Idaho and western Montana south to the Coast Ranges and Sierra Nevada of central California (Bull and Collins 1993, Sterling and Paton 1996). In San Diego County, the Vaux's swift is largely a migrant, occasionally common (Unitt 2004). The Vaux's swift breed in coniferous and mixed coniferous/deciduous forests more often in old growth than younger stands (USFS 2008). The presence of live or dead large diameter, hollow trees is a necessary requisite for breeding, although chimneys are occasionally used (Bull and Collins 1993). Non-breeding and post-breeding birds also require hollow trees or chimneys for roosting (USFS 2008). Open water where insects congregate is probably an important element of high

quality foraging habitat, and proximity of nest sites to such areas may be a factor influencing reproductive success (Sterling 2001). Within the Preserve, the Vaux's swift was observed at the point location located in the northeastern portion of the Preserve (Figure 11).

Yellow warbler (*Dendroica petechia*)

State Species of Special Concern, San Diego County Group 2

The yellow warbler breeds throughout most of San Diego County (Green 2005). In southern California, yellow warblers breed in riparian woodlands in the lowlands and foothill canyons (Garrett and Dunn 1981, Lehman 1994, Roberson and Tenney 1993, Unitt 2004). They typically occur in riparian forests that contain cottonwoods, sycamores, willows, or alders (Stephenson and Calcarone 1999). The breeding season of yellow warbler generally begins in May and can last to August. Available data show a strong tendency for breeding- and wintering-site fidelity over successive years (Lowther et al. 1999). Nest parasitism by brown-headed cowbirds has been strongly implicated as a cause of yellow warbler population declines in coastal lowland and foothill riparian areas of southern California (Garrett and Dunn 1981, Stephenson and Calcarone 1999, Unitt 2004). Within the Preserve, the yellow warbler was observed at the point count station located in the central portion of the Preserve (Figure 11).

Peregrine falcon (*Falco peregrinus*)

State Endangered, San Diego County Group 1, MSCP Covered Species

The peregrine falcon is in the process of recovering much of its former breeding range in North America. Within San Diego County, peregrine falcons occur along coastal areas and at reservoirs in the county during winter. Foraging habitat for this species includes coastal wetland areas, extensive riparian areas, and lakes that support large flocks of waterbirds (ducks, shorebirds) or pigeons. Peregrine falcons traditionally nest on cliff faces but have adapted to also nest on tall building ledges, towers, and similar tall structures. Nest sites need minimal human disturbance. Within the Preserve, the peregrine falcon was observed at the point count station located in the southeastern portion of the Preserve (Figure 11).

Common loon (*Gavia immer*)

State Species of Species Concern, San Diego County Group 2

The common loon is fairly common in estuarine and subtidal marine habitats along entire coast and uncommon on large, deep lakes in valleys and foothills throughout California from September to May (Granholm 2005). This species needs at least 60 feet (18 m) of open water for running take-off from water surface (Palmer 1962). The common loon prefers to nest on small islets, but also uses protected sites on

shore; usually less than 4 feet (1.2 m) from water and concealed by rocks or vegetation, but sometimes in open (Palmer 1962, Vermeer 1973). This species is highly sensitive to nest disturbance by humans and motorboats (Terres 1980). Within the Preserve, the common loon was observed at the point count station located in the western portion of the Preserve adjacent to Olivenhain Reservoir (Figure 11).

Yellow-breasted chat (*Icteria virens*)

State Species of Special Concern, San Diego Group 1

The yellow-breasted chat is a migratory species, arriving in San Diego County around April and departing by late September for wintering grounds in Mexico and Guatemala. This species requires dense riparian thickets of willows, vine tangles, and dense brush associated with streams, swampy ground and the borders of small ponds (Small 1994). Some taller trees (e.g., cottonwoods) are required for song perches (Dunn and Garrett 1997). It is most often found in areas in early stages of succession, as opposed to young and mature forests (Melhop and Lynch 1986). Loss and degradation of riparian habitat have caused a marked decline in the breeding population in recent decades in California. Another threat to this species includes potential nest predators such as western scrub jays (*Aphelocoma californica*), dusky-footed woodrats, raccoons, and several species of snakes. Additionally, chats are a frequent host of the brown-headed cowbird (Burhans and Thompson 1999). Within the Preserve, the yellow-breasted chat was observed at the point count station located in the northwestern area of the Preserve (Figure 11).

White-faced ibis (*Plegadis chihi*)

State Watch List, San Diego County Group 1, MSCP Covered Species

The white-faced ibis is an uncommon summer resident in sections of southern California, a rare visitor in the Central Valley, and is more widespread in migration (Granholm 2005). It prefers to feed in fresh emergent wetland, shallow lacustrine waters, muddy ground of wet meadows, and irrigated or flooded pastures and croplands and nests in dense, fresh emergent wetland (Granholm 2005). This species roosts amidst dense, freshwater emergent vegetation such as bulrushes, cattails, reeds or low shrubs over water (Ryder and Manry 1994). The white-faced ibis has declined in California and stopped breeding regularly, probably from destruction of extensive marshes required for nesting (Remsen 1978). Elsewhere in range, pesticides have caused decline in numbers (Terres 1980). Within the Preserve, the white-faced ibis was observed at the point count station located in the northeastern area of the Preserve (Figure 11).

Double-crested cormorant (*Phalacrocorax auritus*)

State Watch List, San Diego County Group 2

The double-crested cormorant is a yearlong resident along the entire coast of California and on inland lakes, in fresh, salt and estuarine waters (Granholm 2005). This species rests in daytime and roosts overnight beside water on offshore rocks, islands, steep cliffs, dead branches of trees, wharfs, jetties, or even transmission lines (Granholm 2005). Perching sites must be barren of vegetation (Bartholomew 1943). The species usually forages within 5 to 10 miles (8-16 km) of roost or nest colony (Palmer 1962). The double-crested cormorant is susceptible to reduced nesting success from persistent pesticides in water (Granholm 2005). Many nesting colonies in California have been abandoned after human disturbance and habitat destruction (Remsen 1978). Within the Preserve, the double-crested cormorant was observed at point count stations located throughout the Preserve (Figure 11).

Coastal California gnatcatcher (*Polioptila californica*)

Federal Threatened, State Species of Special Concern, San Diego County Group 1, MSCP Covered Species

The coastal California gnatcatcher is a non-migratory bird endemic to the coastal slope of southern California and northwestern Baja California Norte, Mexico, from Ventura County southward to approximately El Rosario, Mexico. It is associated with coastal sage scrub plant communities, including Venturan coastal sage scrub, coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub. The breeding season extends from late February through July, with the peak of nest initiations occurring from mid-March through mid-May. The coastal California gnatcatcher is threatened by urban development and nest parasitism by the brown-headed cowbird (*Molothrus ater*). Within the Preserve coastal California gnatcatcher was observed at the point count stations located in the eastern and western areas of the Preserve (Figure 11).

Western bluebird (*Sialia Mexicana*)

San Diego County Group 2, MSCP Covered Species

The western bluebird is a common cavity-nesting songbird of oak woodland and pine forests throughout the western United States. It breeds in open woodlands of oaks, riparian deciduous trees, or conifers with herbaceous understory, and winters in a wide variety of open habitats at elevations below 4,000 feet (1,200 m). Bluebirds breed from the eastern reaches of lowland coastal valleys such as Lake Hodges, along the San Diego River east of Santee, and drainages east of Otay Reservoir, up through the foothills and montane areas where suitable habitat occurs. This species is vulnerable to competition with more aggressive introduced species (e.g.,

European starling, [*Sturnus vulgaris*], and house sparrow, [*Passer domesticus*]) for scarce nesting cavities (McLaren 1963, Zeleny 1969, Patterson 1979). However, in San Diego County, this species appears to be extending its range, successfully colonizing urban areas and adapting to novel nest sites such as nest boxes and certain species of palms (Unitt 2004). Within the Preserve, the western bluebird was observed at the point count station located in the northeastern portion of the Preserve (Figure 11).

California pocket mouse (*Chaetodipus californicus*)

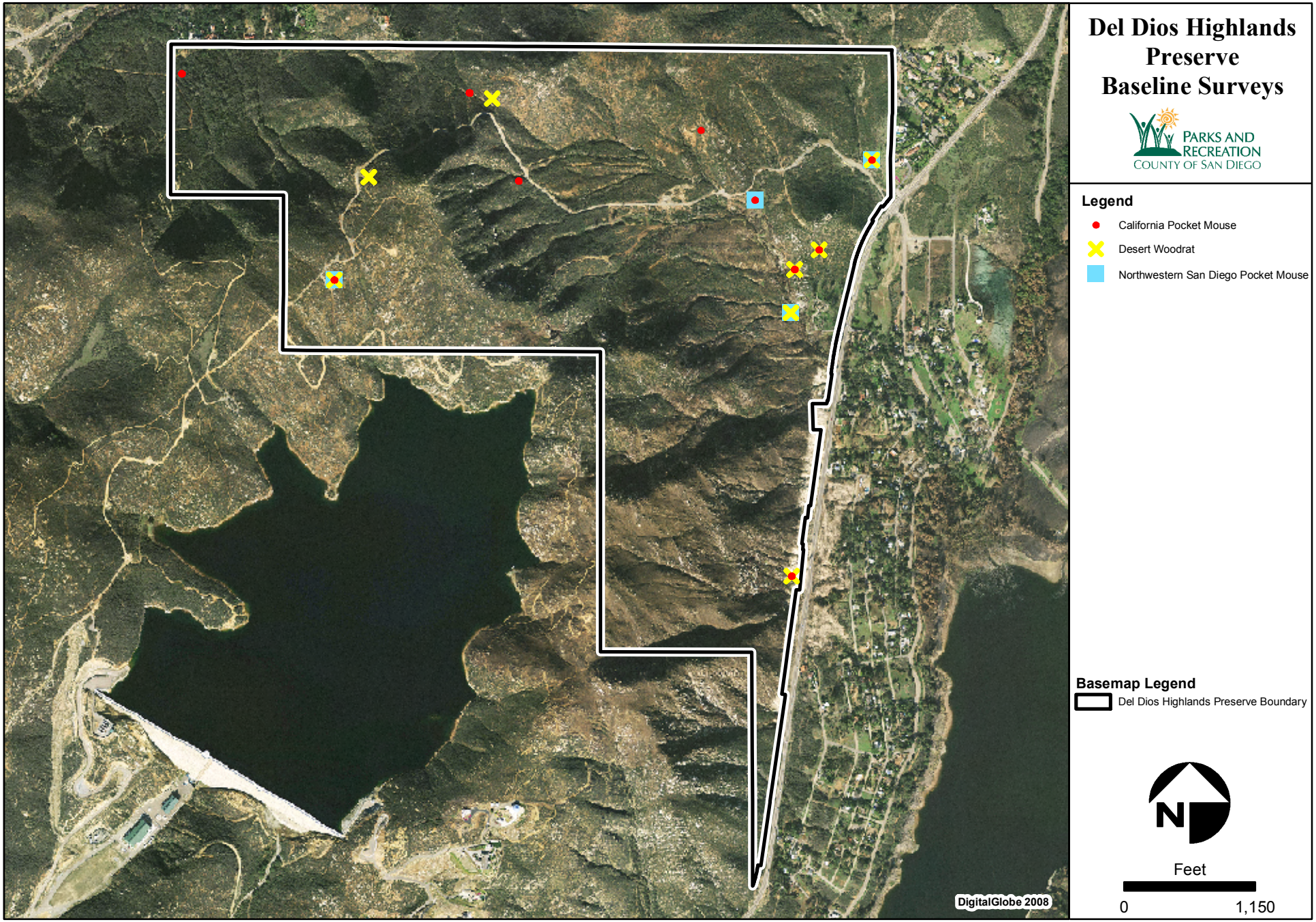
State Species of Special Concern, San Diego County Group 2

The California pocket mouse is distributed from San Francisco Bay south to the border of Mexico, east to the edge of the Great Valley and from Auburn south along the foothills of the Sierra Nevada, and west across the Tehachapi Mountains to the coast (Brylski 2005). It is found in a variety of habitats year-round, including coastal scrub, chamise-redshank and montane chaparral, sagebrush, annual grassland, valley foothill hardwood, valley foothill hardwood-conifer, and montane hardwood habitats at elevations from sea level to 7,900 feet (2,400 m) (Brylski 2005). The species occurs in brushy areas but probably is attracted to grass-chaparral edge (Brylski 2005). Grazing of grassland by domestic stock eliminates cover necessary for predator avoidance (Brylski 2005). Within the Preserve, the California pocket mouse was captured at small mammal plots located throughout the Preserve (Figure 12).

Northwestern San Diego pocket mouse (*Chaetodipus fallax*)

State Species of Special Concern, San Diego County Group 2

The northwestern San Diego pocket mouse occurs from the eastern San Gabriel Mountains in the interior to near San Onofre on the coast (Lackey 1996), and south into Baja California. It is found in coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland habitats (Brylski 2005). The availability of shelter provided by rocky slopes or habitats may increase species abundance (Lackey 1996). The San Diego pocket mouse generally exhibits a strong microhabitat affinity for moderately gravelly and rocky substrates (Bleich 1973, Price and Waser 1984). San Diego pocket mouse appears to be sensitive to habitat fragmentation and degradation. Data collected by Bolger et al. (1997) suggests that isolated habitat patches must be at least 62 acres (25 ha) to 198 acres (80 ha) to sustain native rodent populations. Within the Preserve, this species was captured at small mammal plots located in the eastern portion of the Preserve (Figure 12).



Technology Associates International Corporation

Sensitive Small Mammal Species Observed during 2008 Baseline Surveys

Figure 12

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Date: Oct 13, 2008

Desert woodrat (*Neotoma lepida*)

State Species of Special Concern, San Diego County Group 2

The desert woodrat occurs in coastal California from San Luis Obispo south through the Transverse and Peninsular Ranges into Baja California. This species commonly inhabits mixed chaparral, Joshua tree woodlands, pinyon-juniper woodlands, sagebrush, and desert habitats (Zeiner et al. 1990). Thompson (1982) observed desert woodrats actively avoiding open areas that did not provide adequate refuge sites. Nests are constructed with twigs, sticks, cactus parts, rocks and are usually built against a rock crevice, at the base of creosote or cactus, or in the lower branches of trees (Brylski 2005). Within the Preserve, the desert woodrat was captured at small mammal plots throughout the Preserve (Figure 12).

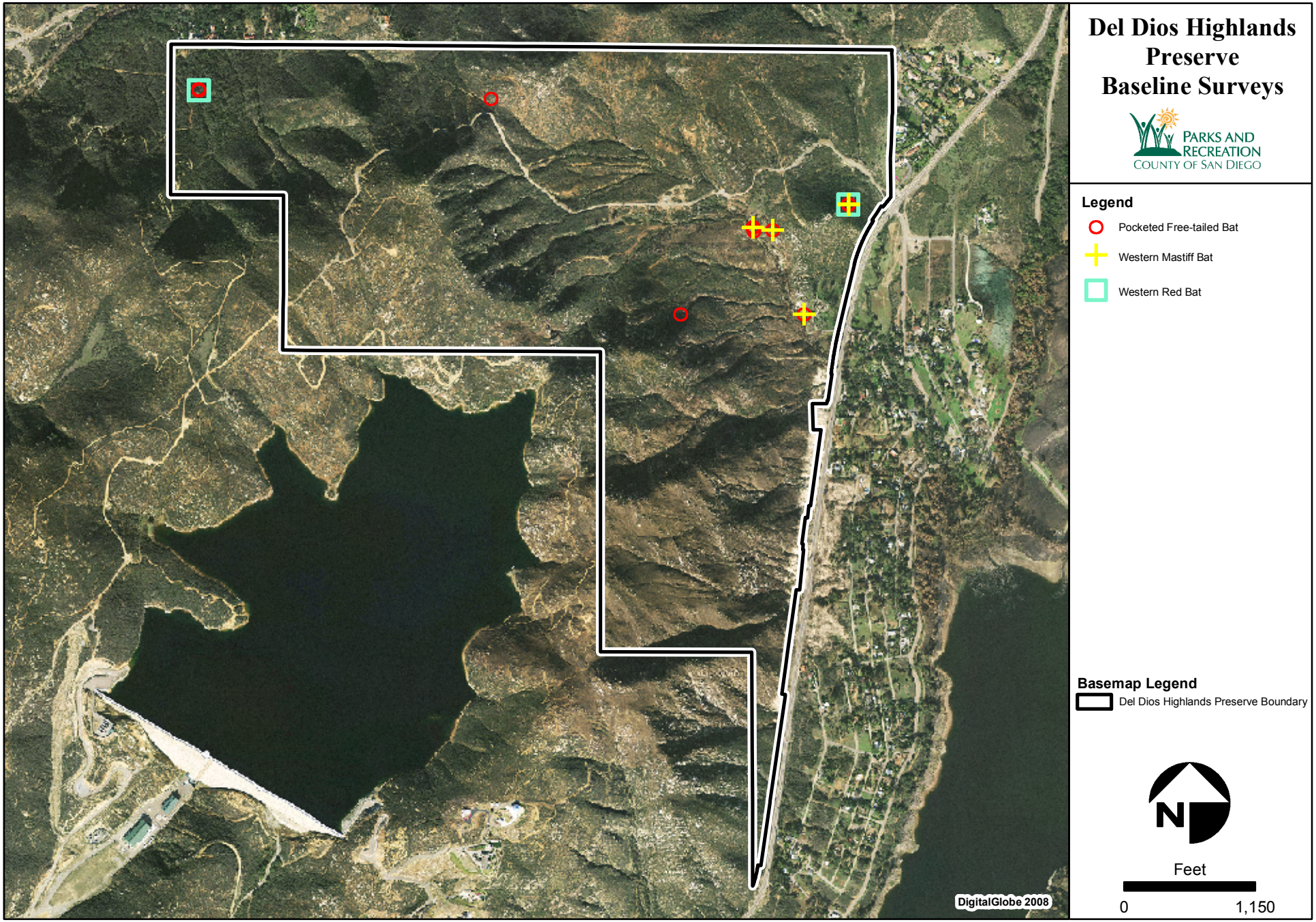
Southern Mule Deer *(Odocoileus hemionus fuliginata)*
San Diego County Group 2, MSCP Covered Species

Southern mule deer are common across the western U.S. in a variety of habitats from forest edges to mountains and foothills (Whitaker 1996). Southern mule deer prefer edge habitats, rarely travel or forage far from water and are most active around dawn and dusk. Southern mule deer scat and track were observed throughout the Preserve.

Western mastiff bat (*Eumops perotis*)

State Species of Special Concern, San Diego County Group 2

The western mastiff bat is primarily known from low to mid elevations in southern and central California southeast to Texas and south to central Mexico (Best et al. 1996). This species is a year-round resident in California (Philpott 1997). The species is found in desert scrub, chaparral, mixed conifer forest, giant sequoia forests, and montane meadows (Philpott 1997). It requires large bodies of flat water for drinking sites (USFS 2008). Day roosts are generally found in areas with rugged, rocky canyons and cliffs (Best et al. 1996). Western mastiff bat populations in California are believed to have undergone significant declines in recent years, due primarily to extensive loss of habitat by urbanization and widespread use of insecticides (Williams 1986). Other factors likely contributing to their decline include loss of large open water drinking sites, pest control operations in structures and activities that disturb or destroy cliff habitat (e.g. water impoundments, highway construction, quarry operations, recreational climbing) (Texas Parks and Wildlife 2003). Within the Preserve, the western mastiff bat was observed in the eastern portion of the Preserve (Figure 13).



Technology Associates International Corporation

Sensitive Bat Species Observed during 2008 Baseline Surveys

Figure 13

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Date: Oct 13, 2008

Western red bat (*Lasiurus blossevillii*)

State Species of Special Concern, San Diego County Group 2

The western red bat occurs in western Canada, western United States, western Mexico, and Central and South America (Harvey et al. 1999). There is little information on the distribution and relative abundance of this species in southern California (Stephenson and Calcarone 1999). This bat is associated with large deciduous trees in riparian habitat and often occurs in streamside habitats dominated by cottonwood, oaks, sycamore, and walnut (Bolster 1998, Harvey et al. 1999). This species is primarily a solitary species that roosts in the foliage of trees and shrubs in habitats bordering forests, rivers, cultivated fields, and urban areas (Harvey et al. 1999). The western red bat forages over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands (Harris 2005). The species does not form colonies and is difficult to find and census (USFS 2008). Within the Preserve, the western red bat was observed in the eastern and western portions of the Preserve (Figure 13).

Pocketed free-tailed bat – (*Nyctinomops femorosaccus*)

State Species of Special Concern, San Diego County Group 2

The pocketed free-tailed bat is rare in California and found in Riverside, San Diego, and Imperial counties (Harris 2005). Habitats frequently used by this species include pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis (Harris 2005). The pocketed free-tailed bat prefers rock crevices in cliffs as roosting sites (Harris 2005). The status of this species in California is poorly known, but it appears to be rare (Harris 2005). Within the Preserve, the pocketed free-tailed bat was observed at all bat survey locations (Figure 13).

3.3.3 Rare, Threatened or Endangered Wildlife with High Potential to Occur

Additional information on the species listed below can be found in the Biological Diversity Baseline Report (Appendix A).

Quino checkerspot butterfly (*Euphydryas editha quino*)
Federally endangered, San Diego County Group 1

The Quino checkerspot butterfly (*Euphydryas editha quino*) was not detected during 2008 surveys. However, it has been historically documented within the Preserve (USFWS 1930, 1931, and 1932). This species is generally associated with sage scrub, open chaparral, grassland, and vernal pool habitats (USFWS 2002) where its host plant or nectar plants occur. Within these habitats the species usually occurs in open or sparsely vegetated areas (including trails and dirt roads), and on hilltops and ridgelines (USFWS 2002). Suitable habitat is present on the Preserve along with the species' larval host plants (USFWS 2002) dot-seed plantain (*Plantago erecta*),

purple owl's clover (*Castilleja exserta ssp. exserta*), and dark-tipped bird's beak (*Cordylanthus rigidus* ssp. *setigerus*). No adult nectar plants were observed during the baseline surveys. Recent drought years and the 2007 Witch Creek wildfire may have had detrimental effects on the species at the Preserve. Nevertheless, suitable habitat is available and, if the species is not currently occupying the Preserve, metapopulation dynamics may lead to future recolonization.

Two-striped Gartersnake *(Thamnophis hammondii)*
State Species of Special Concern, San Diego County Group 1

Though not exclusively aquatic, two-striped gartersnakes are most frequently encountered in or near water, inhabiting streams, ponds, and lakes throughout their range. They can often be found even in temporary bodies of water such as vernal pools (SDNHM 2008). Potential habitat is found in the drainages within the Preserve.

Western Banded Gecko *(Coleonyx variegatus)*
State Species of Special Concern

Western banded gecko is usually found in open areas, often near rocks, and may seek shelter under them, or in crevices. It is found from sea-level up to an elevation of 4,000 feet (SDNHM 2008). Potential habitat is found in the rock outcroppings immediately north of Olivenhain Reservoir on the Preserve.

Golden Eagle (*Aquila chrysaetos*)
State Fully Protected and Watch List, San Diego County Group 1

A species that might have been expected in the Preserve that was not recorded during this survey was the golden eagle. This species had a traditional nest site on the steep slopes and cliffs just south of the Preserve, which continued active into the study period for the San Diego County bird atlas (1997–2001).

Mountain Lion (*Puma concolor*)
San Diego County Group 2

Mule deer sign was common and it is anticipated that mountain lion move through the Preserve. Unconfirmed reports of mountain lions in the San Pasqual Valley have been made in the past year (R. Botta, California Department of Fish and Game big-game biologist, pers. comm.). Further, Randy Botta recalled a road-killed mountain lion near the I-15/Lake Hodges overpass many years ago, however, none recently.

Ringtail (*Bassariscus astutus octavus*)
State Fully Protected, San Diego County Group 2

There is a moderate chance that ringtail occur on the Preserve since the type locality is 26 kilometers (16.2 mi) northeast of the Preserve. Potential habitat is found in the rock outcroppings immediately north of Olivenhain Reservoir on the Preserve.

3.3.4 Non-native and/or Invasive Wildlife Species

Two non-native species, the European starling (*Sturnus vulgaris*) and domestic pigeon (*Columba livia*), were detected during avian point count surveys. The European starling was observed within the eucalyptus trees located in the eastern area of the Preserve. Also, the brown-headed cowbird (*Motothrus ater*) was detected twice in the eastern area of the Preserve. The brown-headed cowbird, a native North American species but absent from the coastal slope of San Diego County before 1913, is a brood parasite known to parasitize more than 220 host species (Muehter 2008).

3.4 Overall Biological and Conservation Value

The southern portion of the Preserve lies within the Hodges Reservoir/San Pasqual Valley MSCP designated Biological Core Resource Area (BCRA). Sixteen BCRA's and associated habitat linkages were identified in the MSCP study area. According to the MSCP Plan, BCRA's are defined as generally supporting a high concentration of sensitive biological resources which, if lost or fragmented, could not be replaced or mitigated elsewhere.

The Hodges Reservoir/San Pasqual Valley BCRA is west of a habitat linkage: Hodges Reservoir north to La Costa/Carlsbad which provides a connection to areas outside the MSCP Subarea Plan boundary.

To define the core and linkage areas, an extensive geographic information system database of vegetation communities, species locations, elevation, slope, soils, drainages, and other physical parameters were used to develop a habitat evaluation map for the study area. The habitat evaluation map ranks habitat areas as Very High, High, Moderate, or Low based on their potential to support priority coastal California gnatcatcher habitat, and wildlife corridors. According to the MSCP Habitat Evaluation Model, the majority of the habitat within the Preserve is rated as medium value with some smaller areas rated as very high in value..

The southern coast live oak riparian forest within the northwest area of the Preserve is considered MSCP Tier I habitat and supports several special status species including red diamond rattlesnake, yellow-breasted chat, California pocket mouse, and western red bat. Coastal sage scrub, an MSCP Tier II habitat, is present in the northeastern area of the Preserve but no California gnatcatchers were observed in this habitat.

3.4.1 Wildlife Linkages and Corridors

The Preserve is an important component of a corridor connecting the coast to significant open space of inland North and East San Diego County. The development and fragmentation of this region has left little space for wildlife movement.

The corridor connects to the coast through the San Dieguito River and Escondido Creek. The drainages are separated closer to the coast but bridged by the Preserve. The urban edge abuts both drainages in some areas, constricting movement except where conserved open space is associated with the San Elijo and Del Mar lagoons. Water is found throughout the year in both of these drainages, allowing many species (e.g., coyote, bobcat, gray fox) to reside permanently and maintain stable populations within this linkage.

The core area of this corridor is located west of Interstate15 (I-15) and comprises the Preserve, Elfin Forest Recreational Reserve, and the undeveloped lands surrounding Olivenhain Reservoir and Lake Hodges. Most mammals can pass under the I-15 overpass of Lake Hodges. Passing over the interstate is probably attempted but with little success.

The corridor widens east of I-15. The San Pasqual Valley consists mainly of open space, agriculture, and ranches. In the last year, California Department of Fish and Game biologist Randy Botta (pers. comm.) has received unconfirmed reports of mountain lions in the San Pasqual Valley. The corridor expands dramatically east of San Pasqual Valley to include the relatively undeveloped lands of Rancho Guejito, Boden Canyon, and the Cleveland National Forest.

4.0 CULTURAL RESOURCES

San Diego County is characterized by a rich and varied historical past. Cultural resources which reflect this history consist of archaeological remains, historic buildings, artifacts, photographs, oral histories, Native American memories and public documents. This RMP identifies the known cultural resources within Del Dios Highlands Preserve and describes areas of potential resources.

In 2008, an archaeological survey was completed for the Preserve in compliance with the California Environmental Quality Act (CEQA) and County environmental guidelines to assist in continued and future land use and resource protection planning. The results of this study can be found in the report titled *Management Plan for Archaeological Resources within the Del Dios Highlands Preserve, San Diego County* dated November 2008, and is attached as Appendix B (Hector and Akyüz 2008). This Phase I inventory involved site records searches, literature reviews, Native American consultation, historic map checks, field survey, and resource documentation. The survey and inventory results were used in the preparation of this RMP.

4.1 Site History

The area was occupied and used by both Diegueño/Kumeyaay/Ipai and the Luiseño Puyumkowitchum/Ataxum before contact with Europeans. The area is associated primarily with the San Pasqual Band of Ipai. San Pasqual Valley to the east was home to the San Pasqual Band of Ipai. Felicita County Park, two miles east of the Preserve, is the site of a large San Pasqual village, although Kroeber (1970) may name the village as a Luiseño village. The Preserve lies right on the "border" between the two groups' ancestral lands. This unique "transition" or "overlap" zone of the two groups may provide significant data for research.

In the Spanish period (1769-1822), the Del Dios Highlands area was peripheral to mission lands although the Kumeyaay inhabitants were close enough to come under their influence. The Mexican period (1822-1848) saw the granting of large ranchos to private parties. Closest to Del Dios were San Bernardo Ranch to the southeast and El Rincon Del Diablo Ranch to the northeast in what is now Escondido. There are vague references to an unregistered rancho in the valley south of Del Dios Highlands called Rancho San Juan, but it may not have been an official Mexican land grant. In any case, it is likely that some cattle were grazed in the area from the adjacent ranchos. With the breakup of most of the ranchos in the American period (1848-present) smaller ranching and farming communities developed throughout San Diego County, reaching a peak in the land booms of the 1800's when many of the present urban centers of northern and eastern San Diego County had their start. Most of the project area history relates to this period.

Robert D. Israel, best known as the old Point Loma Lighthouse Keeper, purchased the location that would bear his name in the late 1860's (Smythe 1908). Robert Israel was born in Pennsylvania in 1826, and as a young man came west to fight in the Mexican War. He arrived in San Diego in the early 1850's and soon married Maria Arcadia e Alipas of the prominent Machado family. Working as a blacksmith and a saloon keeper in Old Town, he eventually moved to Santa Ysabel in the late 1850s with his growing family. Then, in late 1860s, he purchased the Israel farm and built an adobe ranch house. Israel's sons ran the farm during his tenure as lighthouse keeper between 1871 and 1892. In 1896 he sold the farm to James Barham who that same year sold it again to Francisco Lusardi.

A 1932 homesite is located in the northeastern portion of the Preserve. The house was a rock and stucco Craftsman design with an associated storage shed and a driveway from Del Dios Highway are situated northeast of the property's southernmost main seasonal drainage. Also on the property is a concrete cistern northwest of the house, two dams in the drainage, and a graded dirt road linking the house area and upper reservoir. A series of terraces, supported by dry-laid stone retaining walls, extends down the southeast slope of this protuberance to the house, storage shed, and upper course of the driveway from Del Dios Highway. A general estimate for date of construction, both of the house and shed, is somewhere in the late 1930s or 1940s.

4.2 Native American Consultation

In March 2008, Associate Archaeologist Linda Akyüz and Native American Monitor Carmen Lucas, Kwaaymii, Laguna Band of Mission Indians, Laguna Mountain, surveyed the Preserve. Ms. Akyüz and Ms. Lucas conducted archaeological surveys in the 108 acres of the 460 acres of the Preserve that are located on a slope of 20 percent or less.

Associate Archaeologist Michael Garnsey of ASM Affiliates requested that the California Native American Heritage Commission (NAHC) search their files. The NAHC did not identify cultural resources within the project area. The NAHC provided a list of Native American contacts; Ms. Akyüz notified the tribal representatives on the NAHC list on November 29, 2007. Clint Linton of the Santa Ysabel Band of Diegueño/Kumeyaay Indians and Carmen Lucas each prepared a letter about the project (Hector and Akyüz 2008).

4.3 Cultural Resource Descriptions

4.3.1 Prehistoric Archaeological Resources

Bedrock Milling Sites

CA-SDI-12928 (P-37-012928)

This milling slick was not found. It may have exfoliated off the surface of the bedrock because of recent fires in the area. Much of the bedrock in the area was exfoliated. This site lies in the area above a 20 percent slope. The site was found not to be significant by previous recorders because it was an isolated milling slick (Gallegos and Kyle 1992), but it was never tested for subsurface deposits.

CA-SDI-12930 (P-37-012930)

These milling slicks were not found during the ASM survey. They may have exfoliated off the surface of the bedrock because of recent fires in the area. Much of the bedrock in the area was exfoliated. All visible artifacts (one metate and two mano fragments) from this site were collected by Gallegos and Kyle (1992). Gallegos and Kyle (1992) tested the site and recommended that it is not significant because of the lack of subsurface artifacts.

Lithic Scatters

CA-SDI-19063/P-37-029814

This lithic scatter includes four volcanic flakes and a volcanic scraper.

CA-SDI-19064/P-37-029815

This lithic scatter includes four volcanic flakes and a volcanic scraper and is located near previously-recorded milling slicks.

CA-SDI-5496 (P-37-0005496)

This lithic scatter is still present although previous recorders had collected most of the surface artifacts (Gallegos and Kyle 1992). Erosion of the road may be revealing more lithic artifacts than previous recorders had seen. Some of the lithic scatter appears to have been gathered under a bush. The site was updated with these findings. The site was found not to be significant by previous recorders (Gallegos and Kyle 1992).

CA-SDI-12929 (P-37-012929)

This small lithic scatter was not relocated. All surface artifacts had been collected by Gallegos and Kyle (1992). Gallegos and Kyle (1992) tested the site for significance and recommended that it is not significant because of disturbance and lack of subsurface materials.

Rock Art

P-37-030076

Modern rock art was encountered during the survey. Images included three people in a canoe, two suns, a deer, an arrow, rectilinear images, an inverted “V”, and a skull. These images were not mentioned in any previous reports and appear to be recent additions.

Isolates

P-37-029813

This is an isolated volcanic flake.

P-37-015524

This isolated flake was not found during the survey. Gallegos and Kyle did not relocate it in their 1992 survey. Gallegos and Kyle deemed it to be not significant since it was an isolated flake.

P-37-024043

This isolated flake was not found during the survey. As an isolated flake, this resource is recommended as not significant.

Habitation Sites

CA-SDI-12047 (P-37-012047)

According to the site record and report (Gallegos and Kyle 1992), this site contained a large number of ceramic and lithic artifacts on and under the surface. It was a habitation site deemed significant under CEQA. There is currently no evidence of this site on the surface, because all surface artifacts were collected during previous testing. It is possible that over time artifacts will be found on the surface due to erosion, animal burrowing, and weathering.

4.3.2 Historic Resources

CA-SDI-19062/P-37-029812 (Derbas Property)

Stone walls, chimneys, foundations, and irrigation features such as cisterns occupy the Derbas Property. The stone walls, chimneys, and foundation are the remnants of a house. Van Wormer and Newland (1992) had determined the house to be a significant cultural resource because of its Craftsman style and because of the use of local rock to build the base of the walls of the house. However, the 1998 Del Dios Fire destroyed the wooden superstructure and the building has lost its overall integrity that it had at the time of the Van Wormer and Newland evaluation. The rest of the site contains associated walls and cisterns and should be considered significant unless found otherwise through further evaluation.

4.4 Resource Significance

The cultural resources located in the Del Dios Highlands Preserve, while few in number, are varied in size, function, and significance. Twelve sites were identified during the current and previous surveys. One was determined to be a habitation site (CA-SDI-12047) and was previously evaluated as significant under CEQA. Two milling sites (CA-SDI-12928 and CA-SDI-12930) were previously recorded but were not relocated during the current survey. One modern Petroglyph (P-37-030076) was recorded as was one isolate (P-37-029813). Two other isolates (P-37-015524

and P-37-024043) were not found. Three lithic scatters (CA-SDI-19063, CA-SDI-19064, CA-SDI-5496*)* were relocated. CA-SDI-12929 was a lithic scatter previously recorded and surface collected. It was not relocated during the current survey. CA-SDI-19062 consists of the remains of an historic house and outbuildings which burned in the 1994 Del Dios Fire.

Sites in the Preserve that should be considered significant are CA-SDI-12047, CA-SDI-12928, CA-SDI-19062, CA-SDI-19063, and CA-SDI-19064. CA-SDI-12047 has already been deemed significant through subsurface testing. CA-SDI-12928, CA-SDI, 19062, CA-SDI-19063, and CA-SDI-19064 have not been tested and must be considered significant until evaluated through subsurface testing.

The Derbas House in CA-SDI-19062/P-37-029812/Derbas Property was considered significant under CEQA for its Craftsman architectural style and for its use of local rock. Its superstructure burned since its initial evaluation. The house has suffered damage that has compromised its architectural integrity and the ruins of the house can no longer be considered significant. However, the rest of the property has not been evaluated and must be considered significant until testing has shown otherwise. While the structure has lost integrity, the site may still be significant.

Sites CA-SDI-5496, CA-SDI-12929, CA-SDI-12930 have been evaluated (through sub-surface testing) for significance under CEQA and were found not to be significant. P-37-015524, P-37-024043, and P-37-029813 are considered not significant because they are isolates. The modern petroglyphs, P-37-030076, are not considered prehistoric or historic resources; they were recorded to provide context for the other resources in the Preserve.

5.0 RESOURCE MANAGEMENT

5.1 Management Goals and Objectives

Management of the natural and cultural resources within the Preserve will be guided by the general goals and objectives of both the County and the MSCP.

5.1.1 County-Specific

County-specific goals and objectives used to guide the management of resources within the Preserve can be found in the County Strategic Plan, the DPR Strategic Plan, as well as the San Dieguito Community Plan. The County's overall goal or mission, as indicated in the 2009-2014 Strategic Plan, is to provide the residents of San Diego County with superior County services in terms of quality, timeliness and value in order to improve the region's quality of life. The Strategic Plan for Parks and Recreation is closely aligned with the County's strategic initiatives.

The DPR Strategic Plan 2008-2013, outlines the department's priorities for accomplishing its mission over a five-year period. The overall goal or mission of DPR is to provide opportunities for high quality parks and recreation experiences and to preserve regionally significant natural and cultural resources. DPR makes this mission a reality through programs that create healthy communities, protect valuable natural and cultural resources, provide recreation opportunities, reduce crime and vandalism, and foster economic development.

In addition, the San Dieguito Community Plan provides goals and policies which are designed to fit the specific or unique circumstances existing within this community. Goals provided in this plan seek to preserve the present state of spaciousness and rural living within the Plan area; encourage the preservation and enhancement of unique natural features; and provide a wide variety of recreational activities and facilities which will meet the needs and enrich the lives of all San Dieguito residents. To this end, the plan provides policies and recommendations which are meant to guide the allocation of County resources towards prescribed outcomes consistent with the goals.

5.1.2 MSCP-Related

The MSCP Plan and the County's Subarea Plan provide both general and segment-specific goals and objectives. The Preserve is located within the Lake Hodges Segment of the MSCP Subarea Plan and, as discussed in Section 3.4, lies adjacent to a habitat linkage within the Hodges Reservoir/San Pasqual Valley BRCA. The overall MSCP goal is to maintain and enhance biological diversity in the region and conserve viable populations of endangered, threatened, and key sensitive species and their habitat, thereby preventing local extirpation and ultimate extinction. This is intended to minimize the need for future listings, while enabling economic growth in the region.

In order to assure that the goal of the MSCP Preserve is attained and fulfilled, management objectives for the County of San Diego MSCP Subarea are as follows:

1. To ensure the long-term viability and sustainability of native ecosystem function and natural processes throughout the MSCP Preserve.
2. To protect the existing and restored biological resources from disturbance-causing or incompatible activities within and adjacent to the MSCP Preserve while accommodating compatible public recreational uses.
3. To enhance and restore, where feasible, the full range of native plant associations in strategic locations and functional wildlife connections to adjoining habitat in order to provide viable wildlife and sensitive species habitat.
4. To facilitate monitoring of selected target species, habitats, and linkages in order to ensure long-term persistence of viable populations of priority plant and animal species and to ensure functional habitats and linkages.
5. To provide for flexible management of the MSCP Preserve that can adapt to changing circumstances to achieve the above objectives.

5.1.3 Management Directives and Implementation Measures

Based on the above management goals and objectives, recommended management directives have been identified. In accordance with the Framework Management Plan, the ASMDs have been designated as Priority 1 or Priority 2. This designation recognizes the fact that many of the directives cannot be immediately implemented, but instead will occur over the life of the MSCP. The ability to implement and the timing of many of the management directives will be directly related to the availability of funding in any fiscal year and on the priority. The priorities are, therefore, intended to assist in decisions on where and how to spend limited funds. Priority designations are as follows:

Priority 1: Directives that protect the resources in the Preserve and the MSCP Preserve, including management actions that are necessary to ensure that sensitive species are adequately protected.

Priority 2: Directives other than those required for sensitive species status and other long-term items that may be implemented during the life of the MSCP as funding becomes available.

The management directives provided in this RMP have been divided into five elements: A) Biological Resources, B) Vegetation Management, C) Public Use, Trails, and Recreation, D) Operations and Facility Maintenance, and E) Cultural Resources.

5.2 Biological Resources Element (A)

5.2.1 Biological Monitoring

Biological monitoring will be performed onsite to gather information that will assist DPR in making land management decisions to conform to MSCP goals and objectives, as well as DPR objectives. The biological monitoring that will occur will be designed to guide decisions at the individual preserve level. It is recognized that subregional monitoring has been designed to answer concerns and objectives on a larger scale. No subregional monitoring is occurring at Del Dios Highlands Preserve. While objectives of individual preserve and subregional monitoring may be different, subregional monitoring methods that have been developed or are under development may assist monitoring methods and decisions at the preserve level for particular species and habitats.

The key to successful monitoring at the individual preserve level, such that data gathered is not duplicative and meets individual preserve level objectives, is close coordination with stakeholder groups that are performing subregional monitoring, sharing of data, future plans and schedules and keeping abreast of monitoring methods as they are developed. To ensure uniformity in the gathering and treatment of data, a (SANDAG) land management working group has been formed and will designate a land manager who will assist jurisdictions in coordinating monitoring programs, analyzing data, and providing other information and technical assistance. The DPR will work closely with this group.

MSCP covered species have been prioritized for monitoring by San Diego State University (SDSU) in the document *San Diego Multiple Species Conservation Program Covered Prioritization* (Regan et al., 2006). Subregional monitoring methods have been developed for rare plants (McEachern et al, 2007) and animals (USFWS, 2008). These references will assist DPR in developing monitoring methods at the preserve level, as well as the management directives that are identified for specific species in this document.

Management Directive A.1 – Conduct habitat monitoring to ensure MSCPgoals and DPR objective are met (*Priority 1*)

***Implementation Measure A.1.1*:** DPR will conduct habitat monitoring at five-year intervals. Habitat monitoring will address both temporary and permanent habitat changes as well as habitat value. The main product of this monitoring will be a report which will include a discussion of monitoring objectives, monitoring methods to meet those objectives and an updated vegetation community map.

***Implementation Measure A.1.2*:** DPR will conduct general wildlife and rare plant surveys at five-year intervals utilizing and refining baseline monitoring methods to facilitate trend and distribution status analysis. This information will be included in the habitat monitoring report. Encinitas baccharis (*Baccharis vanessae*) an

MSCP covered species previously documented at the Preserve was not identified during the 2007-2008 survey period. Surveys for populations of this species shall be timed to coincide with the plant's blooming period in the fall of years that experience adequate or ample rainfall.

***Implementation Measure A.1.3*:** DPR will conduct monitoring for invasive plant species to assess invasion or re-invasion by exotic plant species within the Preserve. These surveys will focus on areas where invasive, non-native plants have been detected in the past, but also look for new occurrences in the Preserve.

Management Directive A.2 – Meet the corridor monitoring requirements of the MSCP (*Priority 2*)

As discussed in Section 3.4, even though the Preserve does not lie within a primary linkage, it is located within an area of the Hodges Reservoir/San Pasqual Valley BRCA, which is adjacent to a biological linkage. Additionally, the Preserve acts as a corridor connecting the coast to open space areas of inland North and East San Diego County. Due to adjacent residential development to the northeast and east, the trend for local movement across the Preserve is likely south to west or east to west if wildlife can cross Del Dios Highway. Therefore, while corridor monitoring within the Preserve will take place at the preserve-level, it anticipated that it will provide data for better understanding movement on a regional scale.

***Implementation Measure A.2.1*:** DPR will conduct corridor monitoring at five-year intervals in conjunction with habitat monitoring and general wildlife and rare plant surveys (as described in implementation measures A.1.1 and A.1.2). The main product of this monitoring will be a report documenting the results of the current assessment of habitat linkage function including a list of focal species detected.

5.2.2 MSCP Covered Species-Specific Monitoring and Management Conditions

Not all species occurring within the Preserve are expected to require species-specific management. It is expected, rather, that other management directives and implementation measures outlined under the Biological Resources and Vegetation Management elements should be sufficient to protect and manage optimal habitat conditions for most, if not all, species to maintain and/or thrive within the Preserve. However, there are some species listed as MSCP Covered Species in the County's Subarea Plan which require additional management measures, particularly if monitoring indicates that the general guidelines are not sufficient to maintain acceptable population levels. Table 3-5 of the Final MSCP Plan (City of San Diego 1998) provides management and/or monitoring measures for specific MSCP species.

In addition, in the document *San Diego Multiple Species Conservation Program Covered Prioritization* (Regan et al, 2006), SDSU has prioritized the MSCP covered species for monitoring. The species were classified as Risk Group 1 (most endangered), Risk Group 2 (moderately endangered), and Risk Group 3 (less endangered). Next, the threats/risk factors facing the species were identified and ranked as high, moderate, or low degree of threat to the species. Only management conditions addressing high and moderate threats for Risk Group 1 species will be discussed in this RMP. No Risk Group 1 species currently occur within the Preserve.

Management Directive A.3 - Comply with applicable conditions of coverage for MSCP Covered Species (*Priority 1*)

***Implementation Measure A.3.1*:** Implement the species-specific monitoring and management conditions as listed in Table 3-5 of the MSCP (City of San Diego 1998) and *San Diego Multiple Species Conservation Program Covered Prioritization* (Regan et al., 2006) for all MSCP Covered Species detected within the Preserve.

The conditions of coverage for those species currently known to occur in the Preserve are listed below followed by an explanation of how monitoring and management activities in the Preserve will comply.

Wart-stemmed ceanothus (*Ceanothus verrucosus*)

Monitoring: Table 3-5 - Habitat Based, SDSU - Risk Group 3

Management Conditions: Table 3-5 states area-specific management directives must include specific management measures to increase populations, including specific management measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire. Management measures to accomplish this may include prescribed fire.

Management measures to reduce the risk of catastrophic fire are addressed through vegetation management implementation measure E.4.3 below. Management measures to increase populations and address autecology and natural history of the species are addressed below in implementation measure E.1.1.

Coast Horned Lizard *(Phyrnosoma coronatum blainvillii*)

Monitoring: Table 3-5 - Site Specific, SDSU - Risk Group 3

Management Conditions: Table 3-5 states area-specific management directives must include specific measures to maintain native ant species, discourage the Argentine ant, and protect against detrimental edge effects to this species.

No Argentine ants were observed within the Preserve and no landscaping on-site is proposed. Edge effects are addressed through multiple implementation measures under management directives D.6 and D.7 below.

Orange-Throated Whiptail (*Cnemidophorus hyperythrus beldingi*)

Monitoring: Table 3-5 - Site Specific, SDSU - Risk Group 3

Management Conditions: Table 3-5 states area-specific management directives must address edge effects.

Edge effects are addressed through multiple implementation measures under management directives D.6 and D.7 below.

Cooper's Hawk (*Accipiter cooperii*)

Monitoring: Table 3-5 - Habitat Based, SDSU - Risk Group 3

Management Conditions: Table 3-5 states area-specific management directives must include 300-foot impact avoidance areas around active nests and minimization of disturbance in oak woodlands and oak riparian forests.

No nesting territories were observed within the Preserve during the 2007-2008 surveys; however future detection will be addressed through general wildlife surveys (as described in implementation measure A.1.2). Although no future projects are anticipated, any proposed impacts will be conditioned to avoid nests and minimize disturbance to oak and riparian forests present on-site.

Ferruginous hawk (*Buteo regalis*)

Monitoring: Table 3-5 - Habitat Based, SDSU - Risk Group 3

Management Conditions: None

No nesting territories were observed within the Preserve during the 2007-2008 surveys; however future detection will be addressed through general wildlife surveys (as described in implementation measure A.1.2 above).

Peregrine falcon (*Falco peregrinus*)

Monitoring: Table 3-5 - Habitat Based, SDSU - Excluded

Management Conditions: None

No nesting territories were observed within the Preserve during the 2007-2008 surveys; however future detection will be addressed through general wildlife surveys (as described in implementation measure A.1.2 above).

White-faced ibis (*Plegadis chihi*)

Monitoring: Table 3-5 - Habitat Based, SDSU - Risk Group 3

Management Conditions: Table 3-5 states management directives must include specific measures to protect against detrimental edge effects of this species.

Edge effects are addressed through multiple implementation measures under management directives D.8 and D.9.

Coastal California gnatcatcher (*Polioptila californica*)

Monitoring: Table 3-5 - Area-specific Management Directives, SDSU - Risk Group 2

Management Conditions: Table 3-5 states area-specific management directives must include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to maintain or improve habitat quality including vegetation structure. No clearing of occupied habitat may occur between March 1 and August 15.

Edge effects are addressed below in management directives D.8 and D.9, fire protection is addressed below in implementation measure B.4.3, habitat management is addressed in implementation measures A.1.1, and habitat restoration B.1.1. Any future projects will require protocol gnatcatcher surveys to determine if the site is occupied.

Western Bluebird (*Sialia mexicana*)

Monitoring: Table 3-5 - Habitat Based, SDSU - Excluded

Management Conditions: None

No nesting territories were observed within the Preserve during the 2007-2008 surveys; however future detection will be addressed through general wildlife surveys (as described in implementation measure A.1.2 above).

Southern California Rufous-Crowned Sparrow (*Aimophila ruficeps canescens*)

Monitoring: Table 3-5 - Habitat Based, SDSU - Risk Group 3

Management Conditions: Table 3-5 states area-specific management directives must include maintenance of dynamic processes, such as fire, to perpetuate some open phases of coastal sage scrub with herbaceous components.

A small area of coastal sage scrub habitat occurs within the northeastern area of the Preserve. This habitat will be maintained through vegetation management implementation measure B.4.3 below.

Southern Mule Deer (*Odocoileus hemionus*)

Monitoring: Table 3-5 - Habitat Based and Corridor Sites, SDSU - Risk Group 3

Management Conditions: None

5.2.3 Non-Native Invasive Wildlife Species Control

Management Directive A.4 – Reduce, control, or where feasible eradicate invasive, non-native fauna known to be detrimental to native species and/or the local ecosystem (*Priority 2*)

Invasive, non-native species detected within the Preserve during the 2008 surveys include European starling and brown-headed cowbirds. These species do not currently appear to be posing an immediate threat to native species and/or the local ecosystem; however, they have potential to out compete native species for valuable resources.

***Implementation Measure A.4.1*:** DPR will conduct surveys for the presence of invasive, non-native wildlife species of management concern, including European starlings and cowbirds, at five-year intervals in conjunction with habitat monitoring and general wildlife surveys (as described in implementation measures A.1.1 and A.1.2).

***Implementation Measure A.4.2*:** If detrimental effects of these species are detected within the Preserve, preparation and implementation of a trapping and removal program, or other means of humane control should be initiated.

***Implementation Measure A.4.3*:** On a case-by-case basis, some limited trapping of non-native predators may be necessary at strategic locations, and where determined feasible to protect ground- and shrub-nesting birds, lizards, and other sensitive species from excessive predation. If implemented, the program would only be on a temporary basis and where significant problem has been identified and therefore needed to maintain balance of wildlife in Del Dios Preserve and the MSCP Preserve. The program would be operated in a humane manner, providing adequate shade and water, and checking all traps twice daily. Signage at access points and noticing of adjacent residents will inform people that trapping occurs, and how to retrieve and contain their pets.

Implementation Measure A.4.4: As anticipated future equestrian use increases, institute an equestrian education program regarding the potential negative impacts to native ecosystems from the accumulation of non-point source pollutants (e.g., increased potential for occurrence of cowbirds) in staging areas and on frequently used trails. This could be accomplished through implementation of a signage program and interaction between rangers and trail users. See also implementation measure B.3.2.

Implementation Measure A.4.5: As anticipated future equestrian use increases, provide materials for clean up by equestrian users of staging areas to keep it free of non-point source pollutants that may attract cowbirds or other invasive, non-native species. See also implementation measure B.3.3.

5.2.4 Future Research

The MSCP Preserve presents a rich array of research opportunities for the academic and professional communities, primarily in disciplines related to biology, ecology, and natural resources management, but also ranging to environmental design, sociology, and park use and administration. The County of San Diego encourages research within the MSCP Preserve in order to gain valuable information unavailable through other means.

There are a multitude of unanswered questions posed by the development of a multiple species and habitat system where little literature or previous research exists on the majority of species inhabiting the region. In addition, research on vegetation associations and habitats, natural regeneration, restoration, fragmentation, edge effects, genetics, viability, predation, wildlife movement, and much more, would be useful to provide information on the health and dynamics of an urbanized open space system as well as how to improve conditions. The MSCP Biological Monitoring Plan makes recommendations for further research to supplement the required monitoring program.

Management Directive A.5 – Allow for future research opportunities for the Academic and Professional Scientific and Biologic Activities within the Preserve (*Priority 2*)

***Implementation Measure A.5.1*:** DPR will accept and review proposals for scientific research, monitoring, and habitat restoration and enhancement activities which are permitted within the MSCP Preserve. Proposed research activities will be subject to approval by DPR. All such activities must obtain any necessary permits and shall be consistent with this RMP. Additionally, any person conducting research of any kind within the Preserve shall obtain a Right-of-Entry Permit from DPR, which will outline the precautions to be taken to preserve and protect sensitive biological and cultural resources within the Preserve and require results of any research to be made available to DPR.

5.3 Vegetation Management Element (B)

5.3.1 Habitat Restoration

Management Directive B.1 – Restore degraded habitats to protect and enhance populations of rare and sensitive species through stabilization of eroded lands and strategic revegetation (*Priority 1*)

***Implementation Measure B.1.1*:** DPR will assess and determine the need for restoration activities within the Preserve. The need for restoration activities will be determined based on the results of habitat monitoring (as described in implementation measure A.1.1) and trail maintenance activities (as described in implementation measure C.5.3). Any proposed restoration activities should utilize current, accepted techniques and avoid/minimize impacts to sensitive species or native habitats. Any proposed revegetation activities should use only local native species. No active restoration is currently needed. Passive restoration (recovery from fire) is ongoing.

5.3.2 Non-Native Plant Species Removal and Control

Management Directive B.2 – Reduce, control, or where feasible eradicate invasive, non-native flora known to be detrimental to native species and/or the local ecosystem (*Priority 1*)

As described in Section 3.2.4 above, native and naturalized plant species primarily dominate the vegetation communities within the Preserve. However, giant reed, pampas grass, sweet fennel, tamarisk, Mexican fan palm, Peruvian pepper tree, and eucalyptus are found within the northeastern and central areas of the Preserve but are not currently considered major threats to the health of the habitat or species.

***Implementation Measure B.2.1*:** DPR park rangers will routinely pull weeds or remove any non-native plant species in early stages of growth found along trails. DPR will also coordinate with volunteer groups to do non-native plant species removal days at locations identified during invasive plant surveys and monitoring (as described in implementation measure A.1.3).

***Implementation Measure B.2.2*:** DPR will coordinate with other agencies, non-profit organizations, and/or volunteer groups in order to seek funding and implement removal of giant reed, pampas grass, sweet fennel, tamarisk, Mexican fan palm, Peruvian pepper tree, and eucalyptus within the Preserve.

Management Directive B.3 – Manage and minimize the expansion of invasive, non-native flora within the Preserve (*Priority 2*)

***Implementation Measure B.3.1*:** DPR will implement an educational program for Preserve visitors and adjacent residents in order to discourage introduction of

invasive, non-native plants into the Preserve. Information provided will include identification of invasive plants harmful to the Preserve, and prevention methods. The program may also encourage residents to voluntarily remove invasive exotics from their landscaping. See also implementation measure D.9.1.

***Implementation Measure B.3.2*:** DPR will implement an equestrian education program (as equestrian uses increases) regarding the potential negative impacts to native ecosystems from the accumulation of non-point source pollutants (e.g., spread of non-native seeds) in staging areas and on frequently used trails. This could be accomplished through a signage program/brochures and interaction between rangers and trail users. Specific signage could state, "Don't Plant a Pest! Feeding horses weed-free feed for at least 72 hours prior to Preserve entry helps preserve our natural environment". See also implementation measure A.4.4.

Implementation Measure B.3.3: As equestrian use increases, DPR shall provide materials for clean up by equestrian users of staging areas to keep it free of non-point source pollutants and non-native species. See also implementation measure A.4.5.

5.3.3 Fire prevention, control, and management

Current fire management activities in the Preserve include three fuel modification zones (Figure 6) described below:

1) 100-foot fuel modification zone along the entire northeastern border where the Preserve abuts residential development

2) 30-foot fuel modification zone from the right-of-way of Del Dios Highway along the entire eastern border of the Preserve

3) 10-foot fuel modification zone around the perimeter of the staging area

Adequate emergency access roads are found within the Preserve in the form of the one existing trail/dirt road.

Management Directive B.4 – Provide for necessary fire management activities that are sensitive to natural and cultural resources protection (*Priority 1*)

***Implementation Measure B.4.1*:** The County will maintain the established fuel modification zones on Preserve property adjacent to the existing residential structures that are within 100 feet of the Preserve property boundary and along the right-of-way of Del Dios Highway. The intent of a fuel modification zone is to protect habitable structures adjacent to the Preserve from wildfires. It may further protect the resources within the Preserve by absorbing some of the "edge effects" that might otherwise occur within the Preserve.

Management of a fuel modification zone, if needed, will adhere to the following guidelines:

a. Plant materials existing within the fuel modification zone will be removed 30 feet from structures down to the ground, but not disturbing the root structures and thinned for the remaining 70 feet.

b. Supplemental planting may be elected by DPR. Plant materials used shall be non-invasive and acceptable to the Rancho Santa Fe Fire Protection District and City of Escondido Fire Department.

***Implementation Measure B.4.2*:** The existing trail acting as an access road to the Preserve will be maintained annually to keep the trail fuel free. In addition, DPR will continue to coordinate with CAL FIRE, Rancho Santa Fe Fire Protection District, and City of Escondido Fire Department to determine what improvements need to be made to make fire response feasible throughout the Preserve.

***Implementation Measure B.4.3*:** Vegetation management is not a current need within the Preserve to address wildfire issues as vegetation is continuing to recover after the 2007 Witch Creek Fire. The need for vegetation management will be assessed through implementation measure A.1.1. DPR will coordinate with CAL FIRE, Rancho Santa Fe Fire Protection District, and City of Escondido Fire Department to assess the future need to develop an integrated Vegetation Management Plan that will allow environmental documentation for strategic fuels management to be conducted if, and when, needed. A Vegetation Management Plan will also identify likely locations for equipment staging areas and fire breaks, assisting fire fighting activities to avoid known cultural sites, if feasible.

5.4 Public Use, Trails, and Recreation Element (C)

5.4.1 Public Access

Management Directive C.1 – Limit types of public uses to those that are appropriate for the site (*Priority 1*)

***Implementation Measure C.1.1*:** The following public uses are prohibited in the Preserve and are currently specified on signs and/or trail maps. Park rangers are responsible for enforcing these restrictions and may call the sheriff for legal enforcement, as appropriate.

a. Off-road or cross-country vehicle and public off-highway recreational vehicle activity are considered incompatible uses in the MSCP preserve, and are therefore prohibited in the Preserve, except for law enforcement, Preserve management, and/or emergency purposes.

b. Hunting or discharge of firearms is an incompatible use in the MSCP preserve, and is therefore prohibited in the Preserve, except for law enforcement, and/or emergency purposes.

c. Poaching or collecting plant or animal species, archaeological or historical artifacts or fossils from the Preserve is generally prohibited; however, the County may authorize collecting upon approval for scientific research, revegetation or restoration purposes, or species recovery programs. In addition, impacts to historic features are prohibited except upon approval by the County.

d. Fishing, swimming, and wading in rivers, streams, or creeks

e. Camping (including homeless and itinerant worker camps)

f. Feeding wildlife

g. Domestic animals, except horses and leashed dogs

h. Smoking

i. Campfires/Open Flames

Management Directive C.2 – Manage public access in sensitive biological and cultural resource areas within the Preserve (*Priority 1*)

***Implementation Measure C.2.1*:** DPR has identified and mapped narrow endemics and critical populations, and all covered species populations in the Preserve so that these areas can be avoided and/or monitored. Updated information on sensitive species in relation to public access points will be obtained during general wildlife and rare plant surveys in conjunction with habitat monitoring (as described in implementation measures A.1.1 and A.1.2).

***Implementation Measure C.2.2*:** DPR will explore opportunities for public access and viewpoints at the Derbas house site and ensure that any new public-use trails are designed and constructed to avoid and/or minimize impacts to sensitive biological and cultural resource areas. Also see management directive C.4.

***Implementation Measure C.2.3*:** DPR will provide sufficient signage to clearly identify public access to the Preserve. Barriers such as vegetation, rocks/boulders or fencing may be necessary to protect highly sensitive areas. The appropriate types of barriers to be used will be determined based on location, setting and use. Currently, a “No Trespassing” sign is posted at the Derbas house site on the Preserve.

Management Directive C.3 – Provide appropriate interpretive and educational materials (*Priority 2*)

***Implementation Measure C.3.1*:** DPR will share outreach and educational information and notify the public of volunteer opportunities that advance the management, monitoring, and stewardship resources available, and objectives of

this RMP. This information will be provided on the DPR website, www.sdparks.org.

***Implementation Measure C.3.2*:** Opportunities for educational trail-side signage and educational kiosks will be identified within the Preserve. DPR will explore opportunities for interpretive watershed sign at Derbas house site. In addition, signage provided at access points and on trails maps provides a form of education. See also implementation measures E.2.4 and E.3.1.

***Implementation Measure C.3.3*:** When possible, park rangers assigned to this Preserve should organize and conduct interpretative walks or programs within the Preserve. During these interpretative walks or programs the ranger should distribute the "Living Close to Nature" brochure. This brochure discusses how to live in harmony with wildlife. The interpretative walks and programs should be conducted in accordance with park ranger availability.

5.4.2 Fencing and Gates

Currently, gates are located on the eastern and western boundaries of the Preserve in association with the trail (Figure 6). No fencing is currently in place within the Preserve.

Management Directive C.4 – Install and maintain fencing and gates within the Preserve (*Priority 1*)

***Implementation Measure C.4.1*:** Ranger staff will install fencing and/or gates at points of unauthorized public access as appropriate. Points of unauthorized access will be identified in conjunction with trail monitoring activities (as described in implementation measure C.5.1 below).

***Implementation Measure C.4.2*:** Ranger staff will regularly inspect and maintain all fencing and gates within the Preserve. Fencing segments and gates will be repaired or replaced as necessary.

5.4.3 Trail and Access Road Maintenance

Management Directive C.5 – Properly maintain public access roads, staging areas and trails for user safety, to protect natural and cultural resources, and to provide high-quality user experiences (*Priority 1*)

***Implementation Measure C.5.1*:** Ranger staff will monitor public access roads, staging areas, and trails for degradation and off-trail access and use, and provide necessary repair/maintenance per the Community Trails Master Plan (County of San Diego 2005). See also implementation measure B.4.2.

***Implementation Measure C.5.2*:** If temporary closure of a trail is deemed necessary for maintenance or remediation, temporary closure actions will be accompanied by educational support, and public notification through signs and public meeting announcements. An implementation schedule should be written by DPR Operations staff when maintenance or remediation is deemed necessary.

The trail will be posted with signage that indicates temporary closure and the primary reason for the temporary closure (e.g., erosion issues, and sensitive biological resource impacts). Finally, signs should provide contact information for anyone wishing to provide input on trail use or gain additional information regarding temporary closure of trails.

Once posted, the trails in need of maintenance should be blocked with A-frame barricades and/or caution tape. Enforcement of the temporary closure of a trail would require increased ranger patrols of these areas and investigations to determine if the barriers are effective.

***Implementation Measure C.5.3*:** DPR will restore degraded habitats and reduce detrimental edge effects through maintenance and stabilization of trails and strategic revegetation. Measures to counter the effects of trail erosion may include the use of stone or wood cross-joints, edge plantings of native grasses, and mulching of the trail per the Community Trails Master Plan (County of San Diego 2005). See also implementation measure B.1.1.

***Implementation Measure C.5.4*:** If unauthorized trail formation is observed by ranger staff, those specific areas will be posted with clear signage reminding the public to remain on authorized trails. Also see management directive C.6 below.

5.4.4 Signage and Lighting

No lighting is currently present at the Preserve and is not anticipated to be installed in the future.

Management Directive C.6 – Develop, install, and maintain appropriate signage to effectively communicate important information to Preserve visitors (*Priority 1*)

Signs educate, provide direction, and promote sensitive resources and enjoyment of natural areas. Types of signs within the Preserve may include those necessary to: protect sensitive biological and cultural resources (see A.4.4, B.3.2, and E.2.4); provide educational and interpretive information (see C.3.2 and E.3.1); explain rules of the Preserve (see C.1.1 and D.2.1); direct public access (see C.2.3 and C.5.4); and, provide Preserve operations information (see A.4.3 and C.5.2).

***Implementation Measure C.6.1*:** Park rangers will regularly inspect and maintain all posted signs within the Preserve in good condition. Current posted signs include the following rules and regulations: Off-roading and ATV Vehicles Prohibited 41.130; Dogs on Leash At All Times 41.123(c); Weapons and Fireworks Prohibited 41.117; All Plants and Animals Are Protected 41.111 and 41.112; Campfire or Open Flames Prohibited 41.118; and Yield to Trail Users Obey Posted Speed Limit. Signs shall be kept free from vandalism and will be repaired or replaced as necessary.

5.5 Operations and Facility Maintenance Element (D)

5.5.1 Litter/Trash and Materials Storage

Management Directive D.1 – Maintain a safe and healthy environment for Preserve users (*Priority 1*)

***Implementation Measure D.1.1*:** Trash receptacles will be provided and maintained at all staging areas. Trash receptacles should be designed to be secure from intrusion by wildlife species. Ranger staff will regularly empty trash receptacles at least twice a week or more/less as deemed necessary.

***Implementation Measure D.1.2*:** The permanent storage of hazardous and toxic materials within the Preserve will be prohibited. Any temporary storage must be in accordance with applicable regulations, and otherwise designed to minimize any potential impacts.

Management Directive D.2 – Publicize and enforce regulations regarding littering/dumping (*Priority 1*)

***Implementation Measure D.2.1*:** Lists of regulations will be provided to Preserve users (e.g., posted on kiosks) clearly stating that littering within the Preserve is illegal, and will provide appropriate DPR contacts to report any littering observed.

***Implementation Measure D.2.2*:** Regulations regarding littering/dumping will be enforced by park rangers (County Code of Regulatory Ordinance Section 41.116). Penalties for littering and dumping will be imposed by law enforcement officers sufficient to prevent recurrence and reimburse costs to remove and dispose of debris, restore the area if needed, and pay for additional DPR staff time. Areas where dumping recurs will be evaluated for potential barrier placement. Additional monitoring and enforcement will be provided as needed.

5.5.2 Hydrological Management

Native habitats in the MSCP Preserve have evolved, in part, on the distribution and flow characteristics of water. MSCP Preserve property should be managed to maintain existing natural drainages and watershed and to restore or minimize

changes to natural hydrological processes. Proposed structures and activities should be evaluated for effects on hydraulics, and remedial actions should be taken as needed. Best Management Practices (BMPs) should be used both within and outside the preserve system to maintain water quality.

Management Directive D.3 – Install BMPs to prevent potential erosion of hillsides. (Priority 2)

***Implementation Measure D.3.1*:** Monitor potential sites that may erode through implementation measures A.1.1 and C.5.3. If deemed necessary, install BMPs to stabilize slopes.

Implementation Measure D.3.2: DPR shall close the Preserve after heavy rains that cause Escondido Creek to flood and in conjunction with closures of Elfin Forest Recreational Reserve. DPR shall re-open the Preserve at the time Elfin Forest Recreational Reserve re-opens.

Management Directive D.4 – Watershed education to promote water quality and water sustainability. (Priority 2)

Implementation Measure D.4.1: DPR will include a watershed interpretive sign as part of any project that may connect the Derbas house site to the official trail system. See also implementation measure C.3.2.

5.5.3 Emergency, Safety and Police Services

The Framework Management Plan explains that the interface between current and future urban development and MSCP preserve areas requires increased coordination between the preserve managers and agencies responsible for public safety. The MSCP preserve system, including Del Dios Preserve, must accommodate access for emergency response and fire control and management. In the event that entry into the Preserve by law enforcement agencies is needed in the routine performance of their duties, use of existing roads and trails should be encouraged. In emergencies where there is a direct threat to public safety, the law enforcement agency should contact DPR whenever feasible.

Law enforcement and fire control agencies, the National Guard, the U.S. Citizenship and Immigration Service (USCIS), the Border Patrol, and organizations and agencies that respond to natural disasters shall be permitted to perform their activities within any preserve system subject to all applicable requirements of state and federal law.

Management Directive D.5 – Maintain or increase the ability of emergency response personnel to deal with emergencies within the Preserve or vicinity (*Priority 1*)

***Implementation Measure D.5.1*:** Law enforcement officials will be invited to access Preserve property as necessary to enforce the law. If it becomes apparent that extensive enforcement activities are necessary, DPR will coordinate with the applicable agencies to inform field personnel of how to minimize damage to particularly sensitive resources.

***Implementation Measure D.5.2*:** All medical, rescue, and other emergency agencies will be allowed to access Preserve property to carry out operations necessary to protect the health, safety, and welfare of the public. Access issues are further discussed in implementation measure B.4.2.

Management Directive D.6 – Provide for a safe recreational experience for Preserve visitors (*Priority 1*)

***Implementation Measure D.6.1*:** In the event of a natural disaster, such as a fire or flood, park ranger staff shall evacuate the Preserve and coordinate with the Emergency Operations Center. In addition, staff will coordinate with the local agency in charge of responding to the emergency and, if possible, assist where necessary.

***Implementation Measure D.6.2*:** DPR shall develop a Site Emergency Plan for the Preserve that will include: description of Preserve; site contacts; plan activation; evacuations; Site Emergency Response Team; Area Emergency Response; and emergency procedures (e.g., Africanized Honey Bees, Earthquake, Evacuation, Fire, Light Search and Rescue Guidelines, Medical and First Aid Emergencies).

5.5.4 Adjacency Management Issues

As described in Section 2.4.2, there is currently limited development immediately contiguous to the Preserve. The establishment of the MSCP preserve system does not include regulatory authority on properties adjacent to the Preserve; however, the County will require adjacent property owners to follow guidelines when planning and implementing uses and activities that can be regulated when located immediately adjacent to the site.

Management Directive D.7 – Coordinate with adjacent Reserve land manager (Priority 1)

Implementation Measure D.7.1: DPR will coordinate with the Olivenhain Municipal Water District on an annual basis, or more regularly as needed, to ensure contiguous preserved land is managed consistently and in accordance with MSCP.

Management Directive D.8 - Enforce Preserve boundaries (*Priority 1*)

***Implementation Measure D.8.1*:** DPR will enforce, prevent, and remove illegal intrusions into the Preserve (e.g., orchards, decks) on an annual basis, in addition to a complaint basis.

Management Directive D.9 – Educate residents of surrounding areas regarding adjacency issues (*Priority 2*)

***Implementation Measure D.9.1*:** DPR will provide information on this RMP to residents adjacent to the Preserve to heighten environmental awareness, and inform residents of access, appropriate landscaping, construction or disturbance within the Preserve boundaries, pet intrusion, fire management, and other adjacency issues. This RMP will also be accessible on the DPR website and will thus be available to adjacent residents and to the general public.

5.6 Cultural Resources Element (E)

The goal of this section of the RMP is long-term preservation, public interpretation of the cultural resources, and interaction with the bands in whose traditional tribal territory this preserve exists.

Management Directive E.1 – Identify, record, and assess the significance of all cultural resources within the Preserve in areas over 20% slope (*Priority 2*)

***Implementation Measure E.1.1*:** Inventory all Preserve lands over 20% slope for cultural resources. Cultural resources include historic structures, features, and landscaping, as well as historic and prehistoric archaeological sites, features, and artifacts. Inventories shall include a record search at the South Coastal Information Center, SDSU, and on-foot field survey, as well as pertinent archival and historical research.

Any cultural materials collected from the preserves will be curated at a qualified curation facility. No removal or modification of cultural resources shall occur without written approval by the Director of Parks and Recreation.

***Implementation Measure E.1.2*:** Identify and record sites in those areas of the Preserve that were not accessible during the initial Phase I cultural resources survey.

***Implementation Measure E.1.3*:** Assess each newly identified cultural site within the Preserve for eligibility as a Historical Landmark, and to the California Resources Historic Register/National Register of Historic Places.

Management Directive E.2 – Preserve and protect significant cultural resources to ensure that sites are available for appropriate uses by present and future generations (*Priority 2*)

***Implementation Measure E.2.1*:** Threats to the cultural resources from natural (e.g., fire, erosion, floods) or human-caused events shall be identified, and impacts prevented, reduced, eliminated, or adverse effects mitigated. Threats could include movement of resources after a heavy rain/flood or due to erosion after a fire event. Fire suppression activities could also threaten resources. Avoidance or mitigation measures will be identified if impacts are caused by future projects within the Preserve.

***Implementation Measure E.2.2*:** The condition and status of cultural resources shall be noted as part of routine monitoring activities conducted once a year and remedial measures shall be taken if damage is noted. Monitoring activities should also photo-document site conditions so that comparisons can be made over time. Any monitoring of the sites in the Preserve should follow the guidelines found in the County of San Diego *Report Format and Content Requirements, Cultural Resources: Archaeological and Historical Resources* (2007).

All site location information will be kept strictly confidential, and will be available only for qualified cultural resource staff and land managers. Site locations will not be shown on maps or divulged to the public.

***Implementation Measure E.2.3*:** All management activities within the preserve including, but not limited to, trail construction and maintenance, placement of fencing and gates, and restoration of habitat will take into consideration potential impacts to cultural resources and shall avoid adverse impacts to any cultural resources to the maximum extent possible. No ground disturbing activities will be allowed on or in any cultural resource site within the Preserve until the impacts have been assessed. For those sites already evaluated and determined not significant, no further action is required.

If avoidance of significant sites is not feasible, appropriate mitigation measures will be established. Removal or disturbance of cultural resources shall not occur prior to completion of an approved mitigation program, such as data recovery or recordation. Preservation in place is the preferred mitigation measure.

***Implementation Measure E.2.4*:** Signs shall be posted at all trail heads and throughout the Preserve to notify users that sensitive cultural resources within the Preserve cannot be damaged and that removal of any archaeological material is prohibited by law. Protection and preservation of cultural resources will comply with County of San Diego ordinances (Title 4; Public Property, Division 1; Parks and Beaches, Article 2, Section 41.113), and applicable state and federal laws, which will be enforced by park ranger staff. These signs shall be maintained as described in implementation measure C.6.1.

The County will ensure that park ranger staff has sufficient training through the DPR Ranger Academy to actively protect archaeological sites from vandalism

and other forms of human impact. If a Preserve user is suspected of vandalism to cultural resources, the appropriate law enforcement authorities shall be notified. More aggressive measures may be needed if vandalism and damage continue or increase.

Management Directive E.3 – Promote the beneficial uses of cultural resources through interpretation and educational programs (*Priority 2*)

***Implementation Measure E.3.1*:** Off-site, and when possible, on-site interpretive programs for Native American heritage, local and regional history, and prehistory will be developed for the Preserve. These may include lectures, walks, kiosks, signs, historic brochures, and displays, but will not include excavations, collecting of artifacts, or disclosure of confidential site locations unless an interpretive plan is developed and approved by the Director of Parks and Recreation. The plan will include supervision by a qualified archaeologist approved by the Director of Parks and Recreation. See also implementation measures C.3.1-3.

Management Directive E.4 – Honor Native American Heritage and promote Native American ceremonies, gathering, and cultural practices (*Priority 2*)

***Implementation Measure E.4.1*:** Consultation with the San Pasqual Band of Mission Indians shall be conducted frequently in order to identify appropriate management of pre-contact and ethnographic cultural resources. All tribes will be encouraged to participate in evaluation, recordation, protection and preservation of cultural resources.

***Implementation Measure E.4.2*:** The County will open the Preserve to traditional uses by the San Pasqual Band of Mission Indians. All activities by Native Americans in the Preserve shall be conducted with a Right-of-Entry permit specifically designed for the Preserve.

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